

127852-32174

BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Honorable George E. Brown, Jr., And The Honorable Pat Roberts

The Department Of Agriculture's 1983 Payment-In-Kind Program--A Review Of Its Costs, Benefits, And Key Program Provisions

The Department of Agriculture's (USDA's) 1983 Payment-in-Kind (PIK) program paid producers of five commodities a portion of the crops they otherwise would have grown in exchange for removing cropland from production. In response to questions raised by two Representatives, GAO reviewed seven aspects of the PIK program, including its costs and the distribution of program benefits as well as USDA's justification for key provisions of the program. This report provides GAO's responses to each of the Representatives' questions.



127852

GAO/RCED-85-60
AUGUST 29, 1985

533113

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

RESOURCES, COMMUNITY,
AND ECONOMIC DEVELOPMENT
DIVISION

B-213707

The Honorable George E. Brown, Jr.
The Honorable Pat Roberts
House of Representatives

In response to your September 22, 1983, request and subsequent discussions and agreements with your offices, we have reviewed several aspects of the Department of Agriculture's (USDA's) 1983 Payment-in-Kind (PIK) program. Your concerns addressed a variety of issues focusing on the costs, benefits, and key provisions of the program.

USDA announced the PIK program in January 1983 in response to trends that had been evolving in the agricultural sector of the economy since 1980. These trends, which included record harvests and decreased domestic and foreign demand for agricultural commodities, resulted in depressed commodity prices, decreased farm income, and a large buildup of commodity inventories--specifically, corn, grain sorghum, wheat, rice, and cotton.

Like earlier programs aimed at reducing production by inducing farmers to idle cropland, the PIK program paid farmers not to grow certain crops--corn, grain sorghum, wheat, rice, and cotton. However, unlike earlier programs, PIK paid farmers in crops instead of in cash. Accordingly, farmers who chose to participate in the program were paid a prescribed percentage of crops they would otherwise have grown. The principal reasons USDA opted for a PIK program instead of a more traditional cash payment program were because USDA believed (1) it permitted them to utilize the large accumulations of government- and producer-owned commodity inventories, (2) the \$50,000 payment limitation that applied to cash payments did not apply to PIK payments, and (3) it minimized the budget outlays that would have been necessary if direct cash payments were made. USDA's Agricultural Stabilization and Conservation Service (ASCS) administered the PIK program.

Since its announcement, the PIK program has been the subject of a great deal of controversy and debate within the agricultural community, the Congress, and the media. Proponents of the program maintain, among other things, that it is one of the most successful production control programs ever. Its opponents contend that PIK was an overly generous and expensive means of controlling production and question its impact on the supplies of the commodities covered by the program.

Originally, USDA anticipated that a PIK program would be needed for 2 years--1983 and 1984--for all five crops. However, when a large sign-up for the 1983 program and a 1983 summer drought resulted in reduced commodity supplies, USDA decided to reduce the scope of the 1984 PIK program to include only wheat.

Each of the issues you were concerned about and our approach in responding to them were discussed with your offices and described in letters to you dated March 20, 1984. In summary, you requested that we respond to seven questions involving

- the cost of the PIK program;
- the distribution of PIK payments by farm size and type of recipient (individual or organization);
- farmer participation rates for the PIK program, versus earlier USDA production control programs;
- the whole-base bid portion of the PIK program, which permitted farmers of wheat, corn, grain sorghum, and cotton to take their entire base acreage¹ out of production;
- the program's impact on soil and water conservation;
- the adequacy of available commodity stocks to meet payment requirements; and
- the method used by USDA to establish PIK payment rates and other key program provisions.

Brief summaries of our responses to each of your concerns follow, and our detailed responses appear in appendixes II through VIII.

COST OF THE 1983 PIK PROGRAM
COULD BE AS MUCH AS \$10.9 BILLION

We estimate that the cost of the 1983 PIK program was between \$9.8 billion and \$10.9 billion. Nearly all of the costs of the PIK program--\$9.1 billion, or between 83 percent and 93 percent of the cost--represent government- and producer-owned commodities of corn, grain sorghum, wheat, rice, and cotton that were used as payments to participating farmers.

To determine the cost of the 1983 PIK program, we reviewed available budget data to identify each of the cost elements

¹Essentially, base acres are the amount of land ASCS recognizes that a farmer historically plants for crops under its various farm programs.

included in the program and determined the cost of each element to the federal government. The cost elements identified include the commodities used for PIK payments, related storage costs, cash payments--called diversion payments--made to farmers for taking land out of production as a prerequisite for participation in the PIK program, commodity distribution costs, interest, and miscellaneous costs. Our figures are estimated because final PIK data are not yet available. However, USDA expects any subsequent changes to be minimal. A cost range is presented because two elements used in determining PIK costs--storage costs and interest costs--can vary, depending on the assumptions that are used in computing their costs.

Our estimate of the largest cost element, the commodities used to make PIK payments, is based on USDA's estimate of quantities needed to satisfy PIK obligations to participating farmers. We priced these quantities at their cost to the government, which varied depending on the source used to fulfill the obligation.

DISTRIBUTION OF PIK PAYMENTS

To determine the distribution of PIK payments, we evaluated the PIK payments received by program participants by size and type of farm. In doing this, we categorized the payments by farm size and type of farm ownership for each of the five PIK commodities. The types of ownership were further categorized by either individual or business, such as partnerships and corporations. At the time of our analysis, actual data on PIK payments were 96 percent complete, which was sufficient to permit us to make an overall analysis of PIK payment recipients.

The data showed that about 1.031 million farms owned by about 832,000 producers received PIK payments totaling about \$8.8 billion (about 96 percent of all PIK payments). Thirty percent of the PIK payments went to farms having 200 or less acres of cropland. Similarly, 30 percent went to farms between 201 and 500 acres, and about 40 percent went to farms having more than 500 acres. Farms of 200 acres or less accounted for about 61 percent of all farms, farms of 201 to 500 acres represented about 26 percent, and farms of more than 500 acres represented about 13 percent.

The data on PIK payments by type of farm ownership show that about 777,000, or 14 times as many individuals received PIK payments as did organizations such as partnerships or corporations. Further, on the basis of total payments of \$8.8 billion, individuals received about \$7.3 billion, or about 5 times as much as organizations. Overall, individually owned farms received about 83 percent of all PIK payments. Regardless of type of ownership, however, payments received by PIK participants were proportional to the amount of land taken out of production.

PARTICIPATION IN THE 1983 PIK
PROGRAM WAS HIGH, COMPARED WITH
PREVIOUS PRODUCTION REDUCTION PROGRAMS

To assess changes in farm program participation rates, we first reviewed the annual commodity program provisions for wheat, corn, grain sorghum, cotton, and rice for crop years 1978 through 1983. We then identified the production control mechanisms used during this time period and selected for review only those years with programs requiring production controls as a condition for receiving program benefits. We did this to assure some degree of commonality among the farm programs. This provided a more valid basis for comparing participation rates from 1 year to the next. Using this approach, we analyzed farm program participation rates for years 1978, 1979, 1982, and 1983. Crop years 1980 and 1981 were excluded from our analyses because no production control programs were used in those years.

The specific provisions of a farm program vary by year and by crop. In general, however, three major incentives have been used by USDA to attract participation: deficiency payments, diversion payments, and eligibility for loans. Deficiency payments are cash payments made directly to participating farmers when a commodity's market price is lower than a set target price which is established by law. Diversion payments are cash or in-kind (commodity) payments made to participating farmers at a specified cost for taking prescribed percentages of their cropland out of production. In addition to deficiency and diversion payments, participating farmers are also eligible for loans made at established minimum prices, which are in essence floor prices. Under the terms of a loan, a participant agrees to store the commodity under loan and either pay back the proceeds or forfeit the commodity to USDA when the loan comes due. To become eligible for these benefits, farmers can be required to withdraw a certain percentage of cropland from production. Accordingly, the particular provisions in a given farm program for a specified crop are primary factors in a farmer's decision to participate.

Our review of national participation rates for all five PIK commodities covered by farm programs going back to 1978 shows that the rates varied from a low of 37 percent of all eligible acreage being put into a farm program in 1982 to a high of 64 percent in 1983. Historically, participation was high when farmers received direct payments for land that was taken out of production, as was the case in 1983, or when farmers anticipated that deficiency payments would be substantial. When the reverse conditions were true, as they were in 1982, participation was relatively low.

In addition, in formulating the PIK program, USDA made a determination that had a significant impact on farmers' decisions to participate in the 1983 program. Specifically, USDA determined that the \$50,000 payment limitation, which applied to payments

made to farmers in 1983 as well as in prior years,² did not apply to PIK payments. According to USDA officials, this determination was made because PIK payments were in commodities and not in cash. Based on our analysis, estimates are that about 22 percent of all the land taken out of production by farmers participating in the PIK program was due to USDA's determination that the \$50,000 payment limitation did not apply to PIK payments.

WHOLE-BASE PIK WAS MORE
COSTLY THAN REGULAR PIK

Two options were available to farmers wanting to participate in the 1983 PIK program. One option--called regular PIK--was to place from 10 to 30 percent of a farm's base acreage into the PIK program. Under this option a participating farmer was paid a prescribed percentage of the commodity that normally would have been grown on the PIK acres. For corn, grain sorghum, rice, and cotton, farmers were paid at a rate of 80 percent of what they otherwise would have grown. Wheat farmers were paid at a 95 percent rate.

The second option allowed farmers to place their entire base acreage into the PIK program. Under this second option--called whole-base PIK--a farmer was not paid at a prescribed percentage rate. Instead, farmers participating in the whole-base PIK program submitted a bid to their local county ASCS office specifying the percentage rate necessary for them to enroll in the program. The ASCS offices selected the lowest bids--not to exceed the rate paid under the regular PIK program for the respective crops.

As agreed with your offices, we determined USDA's cost for each acre of land taken out of production under the whole-base option versus what it would have cost under the regular PIK option. That is, we determined if it would have been less costly for USDA to reduce acreage under the whole-base PIK option or the regular PIK option. We did an analysis for all crops as well as for each individual crop.

Our analysis shows that, on the average, removing an acre from production under the regular PIK option would have been less costly--\$146.41--than under the whole-base option--\$171.89. A primary reason for the overall cost difference was that, under the whole-base PIK, USDA paid participants in commodities for each acre of land taken out of production. However, under the regular PIK program, USDA did not have to pay farmers for each acre taken out of production. Under regular PIK, most participating farmers were required to take a certain portion of their acreage out of production without receiving direct payments from USDA as a prerequisite for participation in the regular PIK program. For

²The specific legal citation dealing with the payment limitation is Section 1101 of the Agriculture and Food Act of 1981.

instance, corn producers were required to take 10 percent of their land acreage out of production without payment in order to participate in the regular PIK program. No similar prerequisite existed for farmers participating in the whole-base aspect of the PIK program.

Overall, the results of our analysis show a per-acre cost difference of \$25.48 for all PIK commodities. The specific cost differences for each individual PIK commodity varied. On the low end, USDA would have paid \$4.55 per acre less for cotton under the regular PIK option than it did under the whole-base bid option--\$191.57 per acre versus \$196.12 per acre. On the high end, USDA would have paid \$40.73 per acre less for corn under the regular PIK option than it did under whole-base PIK--\$213.72 per acre versus \$172.99 per acre.

Our analysis of this issue focused on the per-acre costs for the regular and whole-base components of the PIK program. We did not, however, consider the impact that changing whole-base PIK participants to regular PIK participants would have had on the cost and effectiveness of the overall PIK program. In other words, if there was no whole-base bid option but only a regular PIK program, fewer acres would have been taken out of production since no farmers would have been permitted to take their entire base acreage out of production. This in turn would have affected the cost and effectiveness of the overall PIK program. Further, we did not consider what the economic impact of not having a whole-base bid program would have on the agricultural sector of the economy as a whole.

THE PIK PROGRAM ACCOUNTED FOR MOST
OF THE SOIL AND WATER CONSERVATION IN 1983

To provide information on the amount of soil and water conserved as a result of the PIK program, we used information obtained from an ongoing evaluation of this issue being done by USDA's Economic Research Service (ERS). However, because final data were not yet available on the number of acres devoted to conservation uses as a result of participation in the 1983 farm programs, the data from ERS are based on a statistical sampling of farms. The error rates associated with the sampling plan that was used are described in appendix VI.

The information we collected from ERS shows that participants in the PIK program removed a total of about 67 million acres of land from production in 1983. This acreage included the land taken out of production only for PIK (48 million acres) as well as land taken out of production as a prerequisite for participating in the PIK program. And according to the provisions of the program, all of the idled land had to be put into conservation use. Recent ERS projections indicate that 93 percent of all soil conserved on farms participating in USDA commodity programs during 1983, as well as 94 percent of all the water conserved, was

attributable to the decreased planting that resulted from the PIK program. Specifically, ERS estimated that 125.6 million tons of soil and 12.2 million acre-feet³ of water were conserved by farms participating in the 1983 PIK program.

Appendix VI contains more detailed information on the conservation aspects of the PIK program. The appendix includes a further discussion of (1) the program's impact on soil and water conservation, (2) the conservation requirements for PIK participants, (3) how compliance with USDA conservation requirements was determined, and (4) the extent to which participating farmers complied with the requirements. On this latter point, USDA's Inspector General has estimated that about 6 percent of the farms that participated in the 1983 farm programs, including the PIK program, did not comply with the required conservation practices.

USDA APPROACH IN MEETING ITS PIK PAYMENT OBLIGATIONS

Our objective in responding to this issue was to evaluate USDA's plans for assuring that adequate commodity stocks were available to meet its PIK payment obligations. To do this, we obtained and analyzed USDA's commodity inventory reports for all PIK commodities for the period October 29, 1982, when USDA began considering the PIK program, through May 27, 1983, when it discontinued the reports. The commodity inventory reports provided management with weekly updates of changes in the amount of commodities owned by or under loan to the government. We compared the reports of available inventory to USDA's estimates of participation in the PIK program. The participation estimates provided management with indications of what its total PIK payment obligations would be. We also obtained and analyzed the proposals, working papers, and supporting documents prepared by USDA's staff, identifying options available to USDA in meeting its PIK obligations. In addition, we interviewed officials responsible for developing the PIK program in ASCS, ERS, and the Office of the Secretary to obtain their views and the rationales behind some of the program decisions that were made.

Overall, we found that the information available at the time supported USDA's decisions. Specifically, we found that the level of participation in the PIK program significantly exceeded USDA's original expectations but that USDA had a contingency plan that enabled it to meet its PIK payment obligations. Initially, USDA anticipated that PIK would remove about 25.5 million acres from production. As it turned out, the original estimate was a little

³An acre-foot is a measurement of water volume equal to the amount of water needed to cover 1 acre of land, 1 foot in depth (about 43,560 cubic feet).

more than half of the 47 million acres⁴ USDA later estimated that PIK actually removed from production, and USDA's PIK payment obligations were about twice the original estimates. As a result, USDA underestimated the amount of commodities needed to meet PIK payment obligations by 1.26 billion bushels of wheat, corn, and grain sorghum and 1.80 billion pounds of rice and cotton. We found that USDA provided for such a contingency and, in the final analysis, was able to meet its payment obligations primarily by purchasing additional commodities from farmers.

PIK'S KEY PROGRAM PROVISIONS
WERE DESIGNED TO ENCOURAGE PARTICIPATION

For the regular PIK program, the exact amount of commodities paid to each farmer was determined by a prescribed payment rate. The payment rate was expressed as a percentage of the crops that would otherwise have been planted and harvested on each acre of land taken out of production to meet PIK requirements. The payment rates for the regular PIK program were set at 80 percent for all crops except wheat, for which the rate was set at 95 percent. As previously stated, the payment rates for farmers participating in the whole-base component of the PIK program were not predetermined but were set at whatever a farmer bid, up to the payment rates established for the regular PIK program. In response to your request, we reviewed the basis for the regular PIK payment rates that were used by USDA and the basis for USDA's decision to include a whole-base PIK component in the 1983 PIK program.

We found that USDA set the payment rates for the regular PIK program at a level that, on average, made it more financially attractive for a farmer to participate in the regular PIK program than not to participate. This was true for each PIK commodity except wheat, for which many producers had already incurred planting costs prior to participating in the PIK program. Accordingly, the additional costs made PIK relatively less attractive to wheat producers compared with the other PIK commodities.

Further, in reviewing the justification for the whole-base bid component of the program, we found that, according to USDA officials, they did not analyze the additional cost of the whole-base PIK program. According to the officials who designed the program, cost was a secondary concern; USDA's overall objective was reducing production.

However, because no specific objectives were established for the level of participation and production control that USDA wanted the PIK program to achieve, no bench marks or criteria exist that can be used in determining whether the PIK payment rates were

⁴The 47-million-acre figure is an estimate based on data available to USDA as of March 22, 1983. More recent analysis shows that this figure was about 48.3 million acres.

reasonable or whether the whole-base PIK portion of the program was justified. Accordingly, no judgment could be made, for instance, on whether the payment rates were too high or not high enough or whether the whole-base bid program was needed to accomplish USDA's production control objectives.

In addition to the concerns already discussed, you asked us to respond to two other issues, one dealing with the PIK program's impact on the amount of base acres that can be placed in USDA's programs by individual farmers and the other dealing with ASCS' computer and record-keeping capabilities to determine what, if anything, could be done to streamline information processing and dissemination for farm programs like PIK. As agreed with your offices, these latter two issues are not addressed in this report. We agreed to include the results of work on the base acres issue in a separate report. We also agreed that, since ASCS is now in the process of automating its information-processing activities at state and county offices, it would be premature for us to conduct a review until the new information-processing system is operating.

We made our review at USDA headquarters in Washington, D.C., and ASCS' Commodity Office in Kansas City, Missouri. At these locations we interviewed key officials and reviewed pertinent regulations, procedures, reports, and other documents, including reports by USDA's Inspector General.

The large volume of data that needed to be analyzed in order to respond to your concerns required us to rely heavily on the automated data files maintained by USDA's Kansas City office. We reviewed USDA's automated data files for obvious errors. We were dealing with national data in this review and did not perform audit work at the county or state level to verify the accuracy of the data put into USDA's data base.

Further, because not all of the data on the PIK program were available at the time of our review, we based our review on USDA's latest available data from July 27, 1984. At that time, the data were about 96 percent complete. For purposes of our review, this was sufficient for assessing and making overall observations about the development and results of the program.

Except for not verifying the reliability of the data in USDA's automated files, our review was done in accordance with generally accepted government auditing standards. Appendix I contains a more detailed description of our objectives, scope, and methodology.

AGENCY COMMENTS AND OUR EVALUATION

The Assistant Secretary for Economics, ASCS, ERS, and the Soil Conservation Service (SCS) commented on this report. For the most part the comments from the Assistant Secretary, ASCS, and ERS

questioned our estimates of the cost of the 1983 PIK program. The comments offered by SCS suggested clarifications to the section of the report dealing with the program's conservation aspects.

Essentially, the major comment dealing with the cost of the PIK program noted that we presented a one-sided picture of the program because the report does not acknowledge that the program accomplished one of its stated goals of minimizing budget outlays. According to the Assistant Secretary for Economics, this portrayal tends to support the popular misconception that the PIK program was a budget buster and a major factor in the fiscal year 1983 budget outlays of \$18.9 billion for the Commodity Credit Corporation (CCC).

The observation that our report does not acknowledge that the PIK program minimized budget outlays is correct. The reason for this is that in establishing the objective of minimizing government farm program budget outlays, USDA said it would take several years for budgetary savings to be realized. USDA expected that the full impact of the PIK program on commodity prices and, in turn, on USDA price and income support payments would not be known until about 1986. Accordingly, it was necessary for USDA to project the impact of the PIK program on budget outlays. It did this by making certain assumptions which could have a major impact on farm program budget outlays but which were difficult to predict through 1986. These assumptions included (1) weather conditions, which have a direct impact on crop production, (2) domestic and foreign demand for domestic agricultural products, (3) foreign production of commodities and (4) the strength or weakness of the dollar. Since USDA established its objective of minimizing budget outlays in 1983, a major drought has occurred, foreign demand for domestic agricultural products has declined, and the value of the dollar has risen dramatically relative to other currencies. Because USDA's budget outlay estimates did not include these factors, we cannot determine whether or not the PIK program will, in fact, minimize budget outlays. Consequently, we did not acknowledge it in the report.

Regarding the Assistant Secretary's observation that our analysis supports the popular misconception that the PIK program was a budget buster, our only comment is that the intent of the report is to provide our estimate of the total cost of the 1983 PIK program. Whether the program was a budget buster is a judgment we do not want to imply or make.

In questioning some of the components of our PIK cost estimates, comments by USDA's Assistant Secretary for Economics suggested that our estimate did not fully consider all the factors that come into play. However, his comments did not question our estimates of the cost of the commodities used in making PIK

payments, which represent between 83 and 93 percent of the total cost. The Assistant Secretary's comments dealt with the other relatively less significant components of our estimate. These comments and our responses to them are on pages 36 through 39 of appendix II.

As arranged with your offices, unless you publicly announce its contents earlier, we do not plan to distribute this report further until 7 days from its issue date. At that time, we will send copies to interested parties and make copies available to others upon request.

 *F. Kerni Boland*
J. Dexter Peach
Director

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ABBREVIATIONS

ARP	Acreage Reduction Programs
ASCS	Agricultural Stabilization and Conservation Service

ASE	Assistant Secretary for Economics
CCC	Commodity Credit Corporation
CED	County Executive Director
ERS	Economic Research Service
FOR	farmer-owned reserve
GAO	General Accounting Office
OIG	Office of Inspector General
PIK	Payment-in-Kind
PLD	paid land diversion program
SCS	Soil Conservation Service
SRS	Statistical Reporting Service
USDA	U.S. Department of Agriculture
bu	bushels
lb	pound

BACKGROUND ON THE DEPARTMENT OF AGRICULTURE'S
1983 PAYMENT-IN-KIND (PIK) PROGRAM

Historically, the U.S. Department of Agriculture (USDA) has used a number of production adjustment mechanisms to take cropland out of production. These mechanisms, collectively called farm programs, are designed to help stabilize and enhance commodity prices and farm incomes. However, trends began to evolve in 1980 and continued into 1983--such as record U.S. harvests and decreased domestic and foreign demand--that made these traditional farm programs ineffective and costly in controlling surplus agricultural commodities. Between 1980 and 1983, it was estimated that farm program payments would increase sevenfold. As a result, USDA announced a 1983 Payment-in-Kind (PIK) program on January 11, 1983, that covered five crops--corn, grain sorghum, wheat, rice, and cotton. Under PIK, farmers were paid in commodities, rather than in cash, to idle cropland and reduce production of surplus commodities. Although the PIK program supplemented existing production adjustment programs, its use of commodity payments instead of cash payments marked a fundamental change in the administration of farm programs over those of the previous 2 decades.

Since its announcement, the PIK program has been the subject of a great deal of controversy and debate within the agricultural community, the Congress, and the media. Proponents of the program maintain, among other things, that it has been one of the most successful production control programs ever, attracting about 48 million of the approximately 212 million acres that were expected to be planted with the commodities covered by the PIK program. Opponents of the PIK program contend that it was an overly generous and expensive means of controlling production and questioned its impact on the supplies of commodities covered by the program.

HOW FARM PROGRAMS ARE ADMINISTERED

USDA's farm programs are administered through the Commodity Credit Corporation (CCC). CCC is a government owned and operated corporation created in 1933 to stabilize, enhance, support, and protect farm income and prices; to assist in maintaining balanced and adequate supplies of agricultural commodities; and to facilitate the orderly distribution of these commodities. CCC also encourages farmers to store designated commodities when stock levels are higher than needed to meet domestic and foreign demand. CCC has no operating personnel of its own. Its programs are carried out primarily through the Agricultural Stabilization and Conservation Service's (ASCS') personnel and facilities.

ASCS has its headquarters in Washington, D.C. It also has offices in each state and in the Commonwealth of Puerto Rico, as well as in most counties throughout the country. Each state and county office has a committee that directs its activities. The county committees, which administer local operations, are composed of three producers elected by the farmers in each county and the

county agricultural extension agent, who is an ex officio member of the committee. They make local program decisions and appoint a county executive director (CED) who directs the county office staff in handling the day-to-day administrative work. The state committees are comprised of from three to five members appointed by the Secretary of Agriculture and the state's director of agricultural extension services.

USDA uses a number of farm programs to try to stabilize farm commodity supplies, prices, and incomes. The Agriculture and Food Act of 1981 (Public Law 97-98) authorizes acreage reduction programs for the 1982-85 crops of wheat, feed grains (including corn and grain sorghum), cotton, and rice. These programs are the latest in a long line of programs intended to adjust and control production by inducing farmers to idle their cropland in time of crop surpluses. For each of the commodities, the Secretary of Agriculture provides for an acreage limitation program if the Secretary determines that the total supply of the commodity will, in the absence of such a program, likely be excessive. In making the determination, the Secretary takes into account the need for an adequate amount of carryover stocks in order to maintain reasonable and stable supplies and prices. The 1981 act also states that whether or not an acreage reduction program for a particular commodity is in effect, the Secretary may use a paid land diversion program to pay farmers for diverting land from production if such payments are necessary to assist in adjusting the total acreage of a commodity to desirable levels.

Like an acreage reduction program, when farmers join paid land diversion programs, they are required to take a certain percentage of their acreage from production. However, under a paid land diversion program, unlike an acreage reduction program, the farmers are paid a specified price, in cash, for the commodities that they would have grown had they not participated in the paid land diversion programs.

When acreage reduction programs or paid land diversion programs are in effect and farmers choose to participate in them, they are required to take prescribed amounts of acreage out of production. In turn the farmers become eligible for farm program benefits, including price-support loans and deficiency payments. Price-support loans are loans made by USDA at established prices, which are in essence floor prices, to farmers who agree to store commodities, thereby keeping them off the market during periods of excess supply to help stabilize prices. The farmer can either pay back the loan with interest or forfeit the commodity to the government when the loan comes due. If forfeited, the government takes possession of the commodity and it becomes part of CCC's inventory. Deficiency payments are cash payments made directly to farmers to supplement the farmer's income when a commodity's market price is lower than a set or target price established by the 1981 act. Unlike paid land diversion payments, however, the amount of deficiency payments for a participating farmer is not

predetermined. Instead, the amount is based on the difference between a commodity's market price and its target price.

In addition to authorizing the acreage reduction and paid land diversion programs, the 1981 act contained a previously established maximum payment limitation of \$50,000 per year that a producer could receive if he or she participated in any or all of the farm programs that were in effect for any 1 year.

RECORD HARVESTS AND LOW COMMODITY PRICES
RESULTED IN A LARGE BUILDUP OF STOCKS

In 1980, trends began to evolve that prevented existing farm programs from meeting their objectives of stabilizing and enhancing farm commodity prices and farm incomes. These trends included record U.S. harvests and decreased domestic and foreign demand. This resulted in low commodity prices for farmers, decreased farm incomes, and a large buildup of commodity stocks placed under price-support loans.

In 1981, U.S. farmers produced record levels of wheat and corn and near-record levels of cotton. Both domestic and foreign demand for these and other U.S. commodities weakened throughout the marketing year, resulting in growing U.S. stock levels. In an effort to reduce supplies, USDA implemented acreage reduction programs for wheat, corn, grain sorghum, rice, and cotton in 1982. Despite this effort to reduce the acres planted, U.S. farmers increased their per acre crop yields and harvested even larger crops of wheat and corn in 1982. The record production, plus the 1981 carryover in stocks, dramatically increased stock levels for nearly all major commodities. By the end of the 1982 crop year, ending rice stocks had quadrupled their level of 2 years earlier; grain sorghum, corn, and cotton stocks had tripled; and wheat stocks had increased about 60 percent. The combination of increased stocks and low commodity prices resulted in large increases in federal outlays for farm programs. In fiscal year 1980, federal outlays for farm programs were \$2.7 billion; however, in fiscal year 1982, these outlays jumped to \$11.6 billion--over a fourfold increase.

The initial 1983 acreage reduction and paid land diversion programs, which the Congress mandated in the Omnibus Budget Reconciliation Act of 1982, were aimed at taking more land out of production than in 1982. However, it became evident soon after these programs were announced in the fall of 1982 that the adverse agricultural trends would continue and federal outlays for farm programs would continue to increase. Subsequently, USDA estimated that fiscal year 1983 federal outlays would increase to \$18.9 billion, a \$7.3 billion increase over fiscal year 1982 and a sevenfold increase since 1980. Because of this situation, USDA reassessed the adequacy of its originally announced farm program for 1983. The result was the announcement of a PIK program on January 11, 1983. The PIK program supplemented the previously

announced 1983 acreage reduction and paid land diversion programs. The PIK program did, however, mark a fundamental change in the administration of farm programs over recent years' farm programs in that farmers were paid in commodities, rather than cash, to idle acres and reduce production of surplus commodities.

USDA's decision to initiate a PIK program was guided by several factors. In determining the final makeup of the 1983 farm programs, USDA's major concern was how best to reduce production and surplus stocks of wheat, corn, grain sorghum, rice, and cotton without increasing farm budget outlays above the estimated record level of about \$19 billion already projected by USDA for fiscal year 1983. In USDA's opinion, providing additional cash benefits under the paid land diversion programs to increase producer participation and reduce commodity production was unacceptable because it would have increased 1983 budget outlays at a time when budget deficits were already at high levels. In addition, it was USDA's position that increased benefits under the paid land diversion programs would not have dramatically increased the number of acres needed in these programs because the \$50,000 payment limitation would limit participation by the large producers.

USDA selected the PIK program as a more attractive option than the alternatives mentioned above for a number of reasons. First, paying farmers in commodities for idling acres and reducing 1983 production would not significantly increase farm program budget outlays in the near term. In addition, according to USDA's Economic Research Service (ERS), another reason the PIK program was used was because it would further lower program costs by reducing the amount of deficiency payments USDA would have to make for 1983 by raising market prices. The commodities used to make payments would come from CCC-owned or producer-owned commodities under price-support loans with CCC. Accordingly, no additional cash outlays would be made for these commodities until later years. Further, by paying farmers in these commodities, the surplus stocks would be reduced, and USDA's storage payments on these commodities would also be reduced. Finally, it was USDA's opinion that payments in commodities would not be subject to the \$50,000 payment limitation that individual producers could receive because the payment limitation applied only to cash payments. As a result, large producers, who did not usually participate in farm programs, would participate in the PIK program, and this would further reduce production.

The PIK option, once selected, supplemented the previously announced acreage reduction and paid land diversion programs. To participate in PIK, farmers had also to enroll in these earlier announced programs. Further, in order to receive program benefits, the land taken out of production under any of the programs had to be conserved in accordance with USDA guidelines. Together, the PIK, acreage reduction, and paid land diversion programs were to accomplish the following objectives:

- Reduce production and commodity stocks.
- Minimize government farm program outlays.
- Help ease commodity storage problems.
- Ensure adequate supplies of commodities at all times.
- Increase net cash farm income.

HOW THE PIK PROGRAM WORKED

Farmers participating in the program had two options of how much land to remove from production. One option, termed regular PIK, was to idle a portion--between 10 and 30 percent--of the cropland or base acres. The other option, termed whole-base PIK, was to idle all of the participants' base acres. (Essentially, base acres are the amount of land USDA recognizes that a farmer historically plants to crops under its farm programs.)

USDA initially designed the PIK program so that payments could be made from two sources--from farmer-owned commodities held by CCC as collateral against loans previously made and from inventory owned by the CCC. If a participating farmer had one or more outstanding loans with CCC, USDA forgave part or all of the loan or loans (principal and interest) and the farmer retained the commodity used as loan collateral as his or her PIK payment. A farmer who did not have an outstanding loan received a letter entitling him or her to receive commodities in CCC inventory as payment.

ASCS' Kansas City office carried out the commodity operations for the program. These operations consisted of acquiring, distributing, and allocating the needed commodities to local ASCS county offices nation-wide. Each county office then issued certificates to the county's participating farmers, enabling them to receive their PIK commodities.

USDA did not have enough CCC-owned stocks of wheat, corn, grain sorghum, and cotton available to pay farmers who did not have outstanding loans. As a result, USDA had to acquire additional quantities. As provided in PIK procedures, USDA purchased these additional quantities from farmers who had outstanding CCC loans and who were not using the loan collateral for their own PIK payments.

Even after purchasing these commodities, USDA did not have enough wheat and cotton to meet all its PIK obligations. However, USDA had established procedures, labeled "harvest for PIK," to make up for these shortages. Under these procedures, USDA required wheat and cotton farmers who were to receive their PIK payments from CCC inventory and who had not enrolled their entire wheat and cotton acreage in PIK to obtain CCC loans for their 1983 crops. The wheat or cotton under loan was then assigned to USDA

as collateral, while the farmers received the loan proceeds. USDA then forgave the loans, and the farmers retained the wheat or cotton as their PIK payment.

OBJECTIVE, SCOPE, AND METHODOLOGY

Objective

As requested, our objective was to analyze seven aspects of the 1983 PIK program. As a result of the questions raised in the request letter and subsequent discussion with the requestors' offices, it was agreed that we would analyze

- the cost of the PIK program (app. II);
- the distribution of PIK payments by size of farm and type of ownership--corporate, partnership, or individual (app. III);
- participation rates for the PIK program compared with earlier USDA production control programs, going back to 1978, including an assessment of the reasons for any changes in historical participation patterns (app. IV);
- the whole-base bid component of the PIK program (app. V);
- the PIK program's impact on soil and water conservation (app. VI);
- the information available to USDA during development to the PIK program on the adequacy of available commodity stocks to meet payment requirements (app. VII); and
- the justification USDA used to establish the payment rates and the whole-base bid component of the program (app. VIII).

Scope

Our review was conducted at ASCS headquarters, Washington, D.C., and its management office in Kansas City, Missouri, which was responsible for much of the paperwork involved in conducting the PIK program. In addition, we acquired information from and interviewed officials of ERS, the Soil Conservation Service (SCS), and 7 state and 185 county ASCS offices. Our contacts with USDA officials went as high as the Deputy Assistant Secretary for Economics, who played a principal role in the formulation of the PIK program.

Further, we reviewed pertinent legislation, regulations, and procedures governing farm programs in general and, more specifically, the PIK program. We coordinated our work with USDA's Office of Inspector General (OIG) and identified and reviewed relevant OIG audit reports on or related to the PIK program. Our review work began in October 1983 and ended in October 1984.

Except for not verifying the reliability of the data in USDA's automated files, our review was done in accordance with generally accepted government auditing standards.

Methodology

A detailed explanation of our methodology on each of the seven issues follows.

Cost of PIK program

To determine the cost of the 1983 PIK program, we reviewed available budget data to identify each of the cost elements included in the program and determined the cost of each element to the federal government. Our estimate does not include costs to consumers and businesses. The cost elements identified include the commodities used for PIK payments, storage costs, diversion payments, commodity distribution costs, interest, and miscellaneous costs. Further, our estimate represents the incremental cost of the PIK program and does not reflect higher deficiency payments that could have occurred under the originally announced programs in 1983.

Our figures are estimated because final PIK payment obligations are not yet known and will not be until later this year. The cost data associated with each element were based on USDA's estimate of the PIK quantities needed to satisfy its payment obligations to farmers as of September 30, 1984--the latest available estimate--and the sources of the commodities USDA intended to use to fulfill those obligations. USDA expects changes to the data to be minimal.

We based our estimate of the largest cost element, the commodities used to make PIK payments, on USDA's estimate of quantities needed to satisfy PIK obligations to participating farmers. We priced these quantities at CCC's cost, which varied depending on the source used to fulfill the obligation; that is, whether the commodities came from outstanding loans, CCC inventory, purchases of additional commodities from farmers with outstanding loans, or "harvest for PIK."

The quantities needed for PIK are based on USDA's report of total quantities needed as of September 30, 1984, plus USDA's estimate of quantities needed to account for any differences between the quality of commodities given to producers and the quality required by the program. For example, producers entitled to number 2 yellow corn in some cases were given number 3 or number 4 corn by CCC. In these cases, CCC had to make up for the quality difference by giving the producers additional quantities of corn.

An alternative method of valuing the PIK commodities could have been at market values at the time the payments to farmers are made. Although market values may reflect actual commodity values

to farmers, determining these values would have been difficult, first, because ascertaining when participating farmers actually took possession of their PIK commodities was too time consuming and, second, because market values vary in different geographical areas. We based our methodology for determining the value of the PIK commodities on what the commodities cost USDA, a figure more representative of the federal government's cost in making PIK commodity payments to program participants.

We based our estimates of the amount of storage costs and diversion payments for PIK commodities on the USDA-established rates for these payments. The storage rates varied depending on the source of commodities. The diversion rates varied by crop.

The distribution costs for PIK commodities were estimated on the basis of USDA's data on the amount paid to private commodity dealers to execute corn, grain sorghum, and wheat exchanges with USDA in areas of the country where USDA did not have sufficient commodities to pay farmers. Also, we obtained USDA data on payments made to farmers eligible for transportation assistance payments. USDA made these payments to farmers in instances where USDA did not provide for PIK deliveries at the agreed-upon locations.

The next cost element is the potential interest payments USDA forgave because of PIK. Farmers who take out loans under the CCC price-support program are generally charged interest on their loans. For regular loans, interest is usually charged for the entire 9-month loan period. For another category of loans called reserve loans, which are issued for 3 years and can be extended for an additional 2 years, interest is charged for only the first year. When commodity prices are high, farmers would most likely repay their loans, including interest, at or before the end of the loan period so that they can retrieve their commodities and sell them. When commodity prices are low, farmers tend to hold their loans until maturity and to forfeit their loan collateral at that time rather than pay off the loans. When loan collateral is forfeited, the farmer is no longer responsible for paying either the loan principal or accrued interest. Consequently, CCC receives no interest from farmers on forfeited loans.

USDA met its PIK obligations to PIK participants who had outstanding regular and reserve loans by forgiving their outstanding loans in proportion to their PIK payments. In addition, USDA purchased additional wheat, corn, grain sorghum, and cotton from farmers with outstanding loans to meet its PIK obligations. USDA paid the farmers for these additional purchases by forgiving the farmers' outstanding loans. When it forgives loans, USDA forgoes any opportunity to recapture the interest farmers owe on these loans. Therefore, this forgiven interest income was considered a PIK cost.

In determining the amount of loans with potential forgiven interest, we used (1) the actual amount of the loans that were

forgiven as a result of USDA's loan purchases and (2) an estimate of the amount of loans to be forgiven to meet farmers' PIK payments from outstanding loans. To estimate the amount of these loans, we determined the universe of outstanding loans, by year, as of April 30, 1983, and then weighted the loans that would be forgiven, by year, in the same proportion as that reflected in the April 30, 1983, loan figures.

The interest rates we used in calculating the potential interest forgiven were based on USDA's interest schedules, which showed the various interest charges by crop year. For crop year 1976 through 1980 loans, the interest rate was fixed for the life of the loan, and the interest rates tended to remain the same for the entire crop year. Beginning with crop year 1981 loans disbursed after January 1, 1981, variable monthly interest rates were charged on the basis of the interest rates the U.S. Treasury charged CCC during the month the loan was disbursed. In addition, the interest rates on outstanding 1981 and subsequent crop year loans is reviewed each January and increased or decreased to reflect Treasury rates at that time. Because most outstanding loans would carry the January rate, we based interest rates for crop year 1981 and 1982 loans on the January interest rate the U.S. Treasury charged CCC in the applicable year.

Since all regular loans except those for rice have a maturity of 9 months, we calculated the potential interest forgiven on all corn, grain sorghum, and wheat loans for a 9-month period. Because 1980 and 1981 regular cotton loans have been extended and continue to accrue interest, the potential interest forgiven on these loans is based on 29 months for 1980 loans and 17 months for 1981 loans.¹ Since rice loans have a common maturity date of April 30, and the majority of these loans are issued by October, the potential interest forgiven was calculated for a 7-month period. The potential interest forgiven on reserve loans is based on 1 year. All interest rate calculations were based on simple, not compounded, interest.

Distribution of PIK payments

To review the second issue, the distribution of PIK program benefits, we evaluated the PIK payments received by program participants by size and type of farm and determined whether the payments received were proportional to the acreage taken out of production.

We obtained data on the amount of PIK payments by farm size and type of farm from USDA's 1983 Deficiency Farm Producer Master

¹Regular 1980 cotton loans have since been extended for 8 and then 12 additional months. Regular 1981 cotton loans have been extended an additional 8 months. Interest continues to accrue during these extensions.

File, which contains computer data on each farm enrolled in the 1983 PIK program. Once we determined the quantities of PIK payments, we valued these commodities at their cost to the federal government. The following table specifies the rates we used in valuing the commodities:

Unit Costs for PIK Commodities

<u>Crop</u>	<u>Unit</u>	<u>Cost^a</u>
Corn	Bushel	\$2.86
Sorghum	Bushel	\$2.92
Wheat	Bushel	\$3.90
Rice	Pound	\$0.08
Cotton	Pound	\$0.54

^aThe costs are based on our analysis of the cost of the PIK program as discussed earlier in this appendix.

We then categorized these payments by farm size and type of farm ownership for each of the five PIK crops. The types of ownership were categorized as either individual or businesses, such as partnerships and corporations. On the basis of the data used to analyze PIK payments by farm size, we also determined whether PIK payments received by various farm sizes were proportional to the acres taken out of production for PIK. If the program worked as it was designed to work, the amount of PIK payments received by a farm or group of farms should have been proportional to the amount of acres taken out of production.

As stated earlier, the PIK quantities for each farm were determined from data contained in USDA's 1983 Deficiency Master File in Kansas City, Missouri. The data in this portion of our review were as of July 27, 1984, and were about 96 percent complete. Since our purpose was to present overall data on the distribution of PIK payments to various farm sizes and types, we believe the data, while not complete, are sufficient to present the results of this analysis. More complete data would have added months of work to our analysis. We do not believe such a delay was merited. Because of the time constraints of this review, and because we were more concerned with overall national data than with the accuracy of specific payments to specific producers, we did not validate the accuracy of the data in the master file. However, we did identify a number of errors in the data base owing primarily to data entry errors. Although we eliminated some of the most obvious errors, we did not attempt to correct all of them. Nonetheless, on the basis of our review of the data, discussions with ASCS officials in Kansas City and Washington, D.C., and several data checks done by ASCS to validate the information before it was entered into the file, we believe that the data are indicative of the overall national conditions existing in 1983

during the PIK program. ASCS reviewed our methodology and suggested some changes that were adopted prior to retrieving the data.

Review of participation rates

To assess changes in farm program participation rates, we reviewed the annual commodity program provisions for wheat, corn, grain sorghum, cotton, and rice for crop years 1978 through 1983. We then identified the production control mechanisms used during this time period and selected for review only those years with programs requiring production controls as a condition for receiving program benefits. We did this to assure some degree of commonality among the farm programs. This provided a more valid basis for comparing participation rates from 1 year to the next. Using this approach, we analyzed participation rates for farm programs for years 1978, 1979, 1982, and 1983. Crop years 1980 and 1981 were excluded from our analyses because no production control programs were announced in those years.

To compare participation rates in the annual wheat, corn, grain sorghum, cotton, and rice programs offered since 1978, we defined participation as the acreage planted for a crop by program participants expressed as a percentage of the total national acreage planted for the crop. We then determined participation rates for each PIK commodity and prepared a national summary for all PIK commodities for crop years 1978, 1979, 1982, and 1983.

To identify the reasons for variances in participation rates in commodity programs administered since 1978, we interviewed agency officials in ERS and ASCS to determine if they had prepared any assessments of participation rates. We also conducted a literature search and contacted farm industry groups to determine if any published reports or studies have analyzed patterns in farm program participation rates.

To provide further insight into the reasons for variance in participation rates, we conducted a telephone survey of the county executive directors² in the two largest producing states for each PIK commodity. We asked the CEDs about farm program provisions that encouraged or discouraged participation in the 1982 and 1983 farm programs, the effect of the annual \$50,000 payment limitation, and the waiver of that limitation for 1983 PIK payments. We also asked the CEDs for their assessment of the reasons for different participation rates for wheat, corn, and grain sorghum between 1978 and 1979. However, because the 1978 and 1979 rice and cotton programs were significantly different from those for wheat, corn, and grain sorghum, we did not pursue them with the CEDs. We did not include rice because the farm program for

²County executive directors are the top county ASCS officials.

this commodity was under an allotment system where program participation and benefits were limited to farmers having a rice allotment from USDA. Cotton was excluded because there were no specific production control requirements for those choosing to participate in the program. We asked no questions about the 1980 or 1981 farm programs because neither was directed at reducing production.

We used a judgmental process in selecting which CEDs we would interview. We chose CEDs from the 20 top producing counties in each of the two largest producing states for each of the five PIK crops. One of these states, however, had only 17 rice and 8 cotton-producing counties; thus, our coverage included only those 25 counties in that state. In total, we contacted 185 CEDs.

This selection process permitted us to obtain responses from CEDs who, as a group, oversee farm programs at the local level covering a large share of the total U.S. production, as shown below:

<u>Information on CEDs Contacted by GAO</u>		
<u>Crop</u>	<u>State</u>	<u>Percentage of 1981 U.S. production</u>
Corn	Illinois	17.7
	Iowa	<u>21.4</u>
Total		<u>39.1</u>
Grain sorghum	Kansas	27.1
	Texas	<u>31.1</u>
Total		<u>58.2</u>
Wheat	Kansas	10.9
	North Dakota	<u>11.9</u>
Total		<u>22.8</u>
Cotton	California	22.7
	Texas	<u>36.3</u>
Total		<u>59.0</u>
Rice	Arkansas	38.1
	California	<u>22.4</u>
Total		<u>60.5</u>

To assess the impact of the USDA's determination that the \$50,000 payment limitation did not apply to 1983 PIK payments, we

obtained data from USDA showing the number of producers that received payments valued at more than \$50,000 in 1983. The frequency distribution included payments made to producers in the form of deficiency payments, land diversion payments, or PIK payments. And, finally, we asked each of the 185 CEDs we contacted about the effect of the payment limitation waiver on 1983 program participation in their respective counties.

Analysis of the whole-base
PIK program

To respond to this concern, we developed national data on the

--whole-base bids received and accepted under this component of the PIK program;

--amount of acreage taken out of production and placed into conservation use as a result of whole-base bidding, including a state-by-state breakdown; and

--total amount of acreage taken out of production and put into conserving use as a result of whole-base bidding versus the amount of acres that would have been required for PIK under the regular PIK option, including data on USDA's cost for the whole-base bid program versus what it would have cost under the regular PIK option.

Our audit work for this segment was primarily based on an analysis of existing computerized data at the ASCS Kansas City Management Office in Kansas City, Missouri. To assist us in retrieving and analyzing the data, we interviewed ASCS representatives in Kansas City and Washington, D.C., to obtain information necessary to complete our analysis. These interviews covered how to retrieve data from ASCS' data base and how to calculate ASCS program benefits.

We conducted no audit work for this assignment at the county or state ASCS offices to verify the accuracy of the data used or to follow up on information initially developed. Because we were more concerned with overall national data than with the accuracy of the data on specific program participants, we did not do a reliability assessment on the ASCS data base. However, we did identify a number of errors in the data base that were due primarily to data entry errors. Although we eliminated some of the most obvious errors in the data base, we did not eliminate all of them. Nonetheless, on the basis of our review of the data, discussions with ASCS officials in Kansas City and Washington, D.C., and many data checks done by ASCS to validate the information before it was entered into the file, we believe that the data are indicative of the national conditions existing in the 1983 PIK program.

Our cost information was calculated from farm records in the ASCS 1983 Deficiency Farm Producer Master File as updated on July 27, 1984. The file was about 96 percent complete at that time.

To obtain national data on the whole-base bids received and accepted by USDA, we relied on bid information extracted from the 1983 Deficiency Farm Producer Master File. From these data, we identified the range of bids accepted and rejected for each PIK commodity except rice. We did not include rice because USDA chose not to accept any whole-base bids for this commodity. We also used the data to compute national bid statistics for each PIK commodity except rice. The statistics we developed for each crop were the mean, or simple average; the median, which is the bid value most closely reflecting a bid where half the bids are above and half below; and the mode, the most frequently made bid.

To determine the number of acres taken out of production as a result of the whole-base component of the PIK program, we used the same data file noted in the preceding paragraph. From that file, we extracted data on the number of acres each whole-base PIK participant took out of production. We then summarized the data to arrive at a national total for the number of acres taken out of production and put into conservation use by participants in the whole-base component of the PIK program.

To determine the amount of acreage taken out of production for whole-base PIK versus the amount of acres that would have been required under the regular PIK option, we had to convert the amount of whole-base PIK acreage to the number of acres that would have been put into conservation use if only a regular PIK program had existed. We made this conversion by using the participation percentages actually experienced in the regular 10-30 PIK program for each commodity. The specific conversion percentages for each commodity were as follows:

Percentages Used in
Converting Whole-Base
PIK Acres to Regular PIK Acres

<u>Commodity</u>	<u>Conversion percentage</u>
Corn	28.4
Grain sorghum	28.1
Wheat	26.7
Cotton	28.8

We then applied the conversion percentages to the total number of whole-base PIK acres. The result provides an estimate of the number of acres that would have been taken out of production under the regular 10-30 PIK program if there had been no whole-base program. In making this estimate, we assumed that those farmers who participated in the whole-base PIK program would still have participated in the regular PIK program if no whole-base

to estimate the commodities needed to meet its PIK payment obligations. The estimates showed that farmers would take about 25.5 million acres of land out of production for the PIK program. USDA was obligated to make PIK payments on each of these acres. Table 22 shows USDA's anticipated PIK payment obligations and sources of payments for each commodity as of January 11, 1983.

Table 22

Estimated PIK Payment Obligations
Compared With Available Commodity Stocks

	Estimated PIK payment obligations as of 1/11/83		Available commodity stocks and sources as of 1/7/83 ^a			
	PIK acres	Obligations ^b	Under loan	CCC-owned	Total	Difference
						between payment obligation and available stocks
----- (millions) -----						
Wheat (bu)	11.5	363.8	1,120.7	32.0	1,152.7	+ 788.9
Corn (bu)	8.6	688.0	2,352.5	353.8	2,706.3	+ 2,018.3
Grain sorghum (bu)	2.0	90.9	402.5	17.1	419.6	+ 328.7
Rice (lb)	.6	2,243.0	5,370.0	1,740.0	7,110.0	+ 4,867.0
Cotton (lb)	<u>2.8</u>	1,232.0	2,669.3	35.7	2,705.0	+ 1,473.0
Total	25.5	*****				

^aThese data were obtained from USDA's latest weekly commodity inventory report prior to Jan. 11, 1983.

^bComputed by multiplying the number of PIK acres times the program yield for each commodity times the payment rate.

USDA UNDERESTIMATED ITS PIK PAYMENT
NEEDS BUT HAD CONTINGENCY PLANS
TO ACQUIRE NEEDED STOCKS

By requiring participating farmers with outstanding loans to use their loan collateral as their PIK payment, USDA minimized the amount of CCC-owned commodities needed for PIK. However, to meet its obligations to farmers who did not have outstanding loans, USDA developed plans to (1) increase CCC-owned inventory by acquiring additional commodities and, if necessary, (2) require farmers to use their 1983 crop as their PIK payment.

Between December 1982 and March 1983, when the sign-up period for the PIK program ended, USDA prepared several estimates of its

PIK payment needs for farmers who did not have outstanding loans. This was done in order to get estimates of the amount by which CCC-owned inventory of commodity stocks might fall short of USDA's PIK payment needs. These estimates indicated possible shortfalls of as much as 200 million bushels of wheat, 500 million bushels of corn, and 720 million pounds of cotton. And, according to USDA officials, it appeared that USDA would not have enough wheat because there was not much CCC-owned wheat available for PIK. In anticipation of these and other shortfalls that might arise, USDA developed a plan to acquire additional commodities.

The contingency plan that USDA developed had two components. One component was to acquire additional commodities by purchasing loan collateral from producers who had loans with CCC but were not using the loan collateral as their PIK payment. Under this approach, USDA offered these producers an in-kind payment in return for the commodities being held under loan. The other component of USDA's plan to acquire additional commodities for PIK payments was to require PIK participants, at USDA's option, to use the crops they harvested in 1983 as their PIK payment. Under this component of the plan, labeled "harvest for PIK," USDA required farmers to obtain loans on the crops harvested in 1983. Accordingly, CCC retained the crops as collateral. USDA then forgave the loans to the farmers, and the farmers retained both the loan proceeds and the loan collateral as their PIK payments. USDA planned to use this option only if its PIK payment needs could not be met by using CCC-owned commodities or by using commodities under loan to CCC.

On March 22, 1983, several days after the sign-up period for the PIK program ended, USDA compiled information on the actual level of participation in the program. The data showed that participating farmers took about 47 million acres of land out of production for PIK--almost two times more than USDA anticipated when the program was first announced. The amounts of commodities USDA was obligated to pay producers for this land, as well as the amount of commodities owned by and under loan to CCC at this time, are detailed in table 23.³

³The actual amounts of commodities USDA provided for PIK differ from the figures in our table because some of the acres taken out of production for PIK were removed under the whole-base PIK option. For these acres, USDA compensated producers at payment rates that were, on average, lower than those used for the regular 10-30 PIK program. Also, program yields for each crop can vary from farm to farm.

Table 23

Revised Estimates of PIK Payment Obligations
Compared to Available Commodity Stocks

	Estimates as of 3-22-83		Available stocks as of 3-18-83 ^a			Difference between payment obligation and available stocks
	<u>PIK acres</u>	<u>Obligations^b</u>	<u>Under loan</u>	<u>CCC-owned</u>	<u>Total</u>	
	- - - - - (millions) - - - - -					
Wheat (bu)	17.5	553.6	1,183.5	34.2	1,217.7	+ 664.1
Corn (bu)	20.6	1,648.0	2,948.6	405.3	3,353.9	+ 1,705.9
Grain sorghum (bu)	4.4	199.9	473.6	18.5	492.1	+ 292.2
Rice (lb)	1.0	3,738.4	5,170.0	1,640.0	6,810.0	+ 3,071.6
Cotton (lb)	<u>3.5</u>	1,540.0	3,305.1	41.6	3,346.7	+ 1,806.7
Total	<u>47.0^c</u> =====					

^aThese data were obtained from USDA's latest weekly commodity inventory report prior to Mar. 22, 1983.

^bComputed by multiplying the number of PIK acres times the ASCS-established program yield for each commodity times the payment rate.

^cSince this analysis was done, more recent data show that this figure was about 48.3 million acres.

As table 23 suggests, if all PIK participants had outstanding loans with CCC, the stocks available to USDA for making PIK payments would have been sufficient to meet its payment obligations. However, this was not the case. Many producers that participated in the PIK program did not have commodities under loan to CCC. In this regard, USDA compared PIK participants with those farmers having commodities under loan to CCC and determined that the amount of CCC-owned rice plus the amount of rice being held as loan collateral by CCC for PIK participants would be sufficient to meet its PIK obligations. However, after going through a similar analysis for the other PIK commodities, USDA determined that additional amounts of wheat, corn, grain sorghum, and cotton would have to be acquired. USDA acted to acquire the needed commodities by purchasing loan collateral and by exercising the "harvest for PIK" option.

By purchasing loan collateral from farmers not using it as their PIK payments, USDA acquired about 182.2 million bushels of wheat, 760.1 million bushels of corn, 111.1 million bushels of grain sorghum, and 374.2 million pounds of cotton for use in helping to meet its PIK payment obligations. These purchases,

combined with CCC's existing inventory, provided USDA with enough commodities to meet its payment obligations for corn and grain sorghum. However, USDA did not acquire the needed amounts of wheat and cotton. Agriculture officials chose to acquire the additional amounts of wheat and cotton by implementing the "harvest for PIK" program for these two commodities. Using the "harvest for PIK" option enabled USDA to acquire 149 million additional bushels of wheat and 311 million pounds of cotton for use as PIK payments.

Consequently, as the following table shows, USDA was able to meet its PIK payment obligations:

Table 24

Source of Commodity Stocks Used
to Meet PIK Payment Obligations

<u>Commodity</u>	<u>Total PIK obligations^a</u>	<u>Source of stocks used to make PIK payments</u>			
		<u>Farmer loan collateral</u>		<u>CCC-owned</u>	
		<u>1982 & prior years</u>	<u>1983 harvest- for-PIK</u>	<u>Purchased for PIK</u>	<u>Other^b</u>
- - - - - (millions) - - - - -					
Wheat (bu)	546.4	215.2	149.0	182.2	0
Corn (bu)	1,788.6	845.4	0	760.1	183.1
Grain sorghum (bu)	177.5	83.1	0	94.4	0 ^c
Rice (lb)	4,119.3	2,166.0	0	0	1,953.3
Cotton (lb)	1,934.5	745.4	311.0	374.2 ^d	503.9

^aObligations as of January 4, 1984. Estimated obligations changed from earlier estimates because of a correction of errors and other factors.

^bThe stocks in this category represent commodities owned by CCC that were obtained from any source other than the PIK purchase program.

^cAssumes that all CCC-owned grain sorghum used for PIK was purchased for PIK. USDA actually purchased 111.1 million bushels of grain sorghum.

^dAssumes that all of the cotton purchased for PIK was used for PIK.

JUSTIFICATION FOR PIK PAYMENT RATES AND
THE WHOLE-BASE PIK PROGRAM

Two key aspects of the PIK program were the payment rates and the whole-base bid component of the program. These aspects of the program were important because they encouraged producers to participate in the program. We reviewed the basis for both of these provisions to determine whether they were justified.

We found it difficult to judge the merits of USDA's justification for the PIK payment rates, as well as its decision to permit a whole-base bid component in the PIK program, because USDA established no specific criteria or goals for what it was trying to accomplish with these particular program provisions. In both instances, no criteria existed beyond the general objective of trying to get farmers to idle as much land as possible under the PIK program. Consequently, no benchmark exists to determine whether the payment rates or the whole-base bid component of the program were justified. Because no quantified goals were established, such as the degree of participation USDA sought in designing the PIK program or the amount of land USDA sought to remove from production, assessing the merits of USDA's decisions and determining whether USDA was justified in establishing the payment rates or in permitting a whole-base PIK is difficult. Further, regarding the whole-base PIK component of the program, USDA did no analysis to determine its potential cost.

DIFFICULT TO DETERMINE WHETHER
PIK PAYMENTS RATES WERE JUSTIFIED

The guiding principle in USDA's approach to establishing payment rates for the PIK program was to set them at a level that would encourage producers to participate in the program. To do this, USDA decided to pay PIK participants at a rate that would make a PIK participant's estimated net income at least equal to the estimated net income of producers participating in the other components of the 1983 farm programs--specifically the acreage reduction program (ARP) and paid land diversion program (PLD). The ARP and PLD components of the 1983 farm program were the only two production control programs in place prior to the announcement of the PIK program.

We reviewed the analyses done by USDA in deriving the PIK payment rates. The analyses USDA used compared the amount of net cash income an average producer would receive if he or she participated in only the ARP and PLD programs with the net income an average producer would receive if he or she participated in the PIK program. The analyses show that for farms of equal size, the estimated net cash incomes of farmers participating in the PIK program were lower than the estimated net incomes of farmers participating in only the ARP and PLD program.

The following table compares USDA's estimated net cash income for a farmer participating in the ARP and PLD programs--the originally announced 1983 farm programs--and a farmer participating in the PIK program for each PIK commodity:

Table 25

Anticipated Net Income for 1983 PLD, ARP, and PIK Programs^a

<u>Commodity</u>	<u>Farmer participating in PLD, ARP programs</u>	<u>Farmer participating in PIK program^b</u>	<u>Difference</u>
Corn	\$14,424	\$ 8,640	\$5,784
Wheat	6,945	3,006	3,939
Grain sorghum	7,360	3,982	3,378
Rice	20,733	13,009	7,724
Cotton	13,249	7,342	5,907

^aBased on a farm with 100 base acres and PIK participant idling 30 percent of his/her farm (30 acres) for PIK.

^bBefore receiving PIK payments.

To make the estimated net cash income of farmers participating in the PIK program about equal to the estimated net cash incomes of farmers participating only in the originally announced ARP and PLD programs, USDA decided that PIK participants would receive payment in commodities (PIK compensation) of a dollar value equal to the difference in net cash income. For example, a corn producer with a 100-acre farm with 30 acres idled in the PIK program would receive a PIK payment of corn worth \$5,784. (See table 25.) The \$5,784 represents USDA's estimate of the amount of PIK payment needed to make the estimated net cash income of a farmer participating in the PIK program at least equal to the estimated net cash income of a farmer participating only in the originally announced ARP and PLD programs for 1983.

After USDA estimated the respective dollar amounts of payment that PIK participants needed to have at least the same net income level as participants only in ARP and PLD, USDA needed to convert the dollar amount to a PIK payment rate that could be applied to all farmers participating in the PIK program. Since PIK payments were made in bushels or pounds of a commodity, and not in cash, the payment rates needed to be expressed in terms of the amount of a commodity a PIK participant received for idling acreage under the PIK program. Accordingly, USDA expressed the PIK payment rate as a percentage of the amount of commodity a participating farmer would otherwise have harvested on his or her PIK acreage. For example, a 73-percent payment rate meant a farmer would have received 73 percent of what he or she would have harvested on the acreage idled for the PIK program.

The following table provides the results of USDA's analysis using the same commodity values as those used in deriving the net cash income levels used in table 25:

Table 26

Results of USDA's Analysis^a
of PIK Payment Rates
(Based on 100-Base-Acre Farm)

<u>Commodity</u>	<u>Dollar amount of payment needed by PIK participants</u>	<u>Dollar amount converted to PIK payment rates</u>
Corn	\$5,784	73 percent
Wheat	3,939	106 percent
Grain sorghum	3,378	79 percent
Rice	7,724	68 percent
Cotton	5,907	63 percent

^aIt should be noted that when USDA did its analysis of payment rates, a range of possible commodity values was used besides those used in deriving table 26. Using different commodity values suggests different payment rates. The commodity values used in table 25 and, thus, table 26 were the floor prices or loan rate values assigned by ASCS for the 1983 programs.

The last column in the table shows the PIK payment rates that USDA believed were needed to make the net cash income of PIK participants at least equal to that of participants in the original ARP and PLD programs. For instance, table 26 shows that a corn farmer would have had to be paid 73 percent of what he or she otherwise would have harvested on the acreage idled for the PIK program.

However, the payment rates ultimately decided upon by USDA were not determined by its analyses. The payment rates USDA chose to use were 80 percent for corn, grain sorghum, rice, and cotton and 95 percent for wheat. Consequently, with the exception of wheat, the payment rates used in USDA's 1983 PIK program were higher than those suggested by USDA's analysis. The following table highlights the differences:

Table 27Differences Between Initial and Final
PIK Payment Rates

<u>Commodity</u>	<u>Payment rate suggested by USDA analysis</u>	<u>Payment rate used in PIK program</u>	<u>Difference (percent)</u>
Corn	73	80	+7
Wheat	106	95	-11
Grain sorghum	79	80	+1
Rice	68	80	+12
Cotton	63	80	+17

After reviewing its analysis, USDA decided to use the higher payment rates of 80 percent for corn, grain sorghum, rice, and cotton and the lower payment rate of 95 percent for wheat. According to the Administrator of ASCS, the higher rates were selected because they were consistent with USDA's desire to encourage participation in the PIK program. The payment rate for wheat was set higher than for the other commodities because many wheat farmers had already incurred planting costs for the winter wheat crop prior to the announcement of the 1983 PIK program in January 1983. Since winter wheat is planted in the fall preceding the year in which it is harvested, producers needed to recoup the costs they incurred in planting their 1983 winter wheat. Accordingly, USDA set the payment rate at 95 percent for this commodity.

As table 27 shows, using the payment rate of 80 percent for the PIK program resulted in participating producers of corn, grain sorghum, rice, and cotton getting commodity payments that were greater than the rates estimated by USDA's analysis. Specifically, corn farmers received a payment bonus of 7 percent, grain sorghum farmers 1 percent, rice farmers 12 percent, and cotton farmers 17 percent. In other words, USDA's analysis suggests that corn farmers participating in the PIK program should have received at least 73 percent of the corn they would have produced if the acreage idled for PIK program. Since USDA paid them 80 percent of what would otherwise have been produced, corn producers received a 7-percent bonus payment.

For wheat producers, however, the situation was different. Again, as table 27 shows, the PIK payment rate for this commodity was established at 95 percent. Yet, according to USDA's analysis, wheat producers participating in the PIK program should have been paid about 106 percent of what they otherwise would have produced if USDA was to maintain their net income level at least equal to that of participants in the ARP and PLD programs. USDA decided on the 95-percent payment rate for wheat because, according to ASCS officials, a policy decision was made within the Office of the Secretary of Agriculture to set the rate at 95 percent.

A judgment on whether the PIK payment rates used by USDA were justified is difficult. While USDA's rationale for establishing the specific PIK payment rates was to help accomplish the rather broad objective of encouraging participation in the 1983 PIK program, no specific goals or criteria were established for the degree of participation sought by USDA. Without more specific goals or criteria--for example, the degree of participation sought, the amount of reduced production, or the level of carry-over stocks for 1983--the effectiveness of the payment rates set by USDA cannot be measured.

DIFFICULT TO DETERMINE
WHETHER WHOLE-BASE PIK
WAS JUSTIFIED OR EFFECTIVE

As we stated in appendix V, to encourage program participation beyond the regular 10-30 PIK program, USDA provided that farmers could elect to idle all of their base acres for any PIK commodity except rice. Farmers who wished to idle all of their base acres for a particular commodity submitted bids to their county ASCS office, with the bids expressed as the farmer's desired payment rate. For example, if a corn producer who wished to idle 100 acres for PIK submitted a bid of 75 percent, then he/she received as compensation 75 percent of the corn that would otherwise have been planted and harvested on the 100 acres.

Like the payment rates for the regular 10-30 PIK program, we reviewed the whole-base bid component of the PIK program to determine how it was justified. In reviewing the justification for this aspect of the program, however, we found no way to assess the justification of including a whole-base provision in the PIK program or whether it was effective. As with the 10-30 PIK program, no specific goals or criteria were established by USDA for what the whole-base bid program was to accomplish or at what cost. Accordingly, no benchmark exists against which to measure the justification for or effectiveness of the whole-base PIK program.

At the time the PIK program was announced on January 11, 1983, USDA permitted farmers to sign up for either the regular PIK option and/or the whole-base PIK option. Those signing up for the whole-base PIK option submitted a bid on what their minimum acceptable PIK payment rates would be. However, USDA did not decide on which, if any, whole base bids it would accept until the sign-up period ended in March 1983.

USDA's overall approach in establishing a whole-base PIK option was to take advantage of the opportunity PIK presented to reduce production beyond that afforded by the other acreage reduction programs used in 1983. However, USDA did limit participation in the whole-base PIK program. Specifically, USDA required that no more than 45 percent of the base acres could be taken out of production for a single PIK commodity in a county. This was done to alleviate the adverse impact of the PIK program on the farm supply industry in any particular county. For example, with less

planting being done in individual counties, the demand for fertilizer, farm equipment, and other farm supplies would decrease. Accordingly, the USDA believed that without some limitations on the amount of acreage that could be taken out of production in any one county, the PIK program could have a severe impact on local farm suppliers. Consequently, in some counties USDA did not accept all whole-base bids because accepting them all would have resulted in exceeding the 45-percent limitation. In these counties, bids were accepted, starting with the lowest bids, up to the point where 45-percent of the county's cropland for a particular PIK commodity would have been idled for PIK. Also, in administering the whole-base bid program, USDA decided to limit the bids it would accept to a maximum of 80 percent for corn, grain sorghum, and cotton and 95 percent for wheat. No whole-base bids were accepted for rice.

Further, according to the Assistant Deputy Administrator for Program Planning and Development and officials in ASCS' Analysis Division, USDA did not analyze the additional cost of the whole-base bid program. In fact, these officials told us that the cost of the whole-base bid program was a secondary concern; the primary concern was reducing production.

As noted above, USDA made its decision to accept whole-base bids on March 22, 1983. At that time, it was clear that USDA's original expectations about the amount of acreage to be taken out of production for the PIK program would be met. Specifically, when the program was announced on January 11, 1983, USDA anticipated that 25.5 million acres would be taken out of production as a result of the PIK program. This included acreage anticipated to be taken out of production for both the 10-30 and whole-base bid aspects of the program. However, when the data on the extent of participation began to come in from county offices in March 1983, they showed that about 30.2 million acres were to be taken out of production for just the 10-30 portion of the PIK program.

Thus, USDA's overall expectations of the amount of land taken out of production for the entire PIK program were exceeded. Nonetheless, USDA went ahead and accepted the whole-base bids to further reduce production. As it turned out, accepting whole-base bids resulted in more than 20 million additional acres' being taken out of production for PIK. As a result, USDA's original expectations of the amount of land taken out of production for PIK were significantly exceeded as the total amount of acreage taken out of production was about 47 million acres. (Because some double counting occurs in the acreage figures for whole-base bid and 10-30 PIK, they do not add to 47 million acres. However, the 47-million-acre figure is more accurate because it eliminates double counting.) But, because USDA did not establish quantified goals for what the program was to accomplish in terms of the degree of participation it sought in designing the PIK program or the amount of land it attempted to remove from production, whether this component of the PIK program was needed or effective is not clear.



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

MAY 16 1985

Mr. J. Dexter Peach
Director
Resources, Community and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for the opportunity to comment on your draft GAO report entitled, "The Department of Agriculture's 1983 Payment-in-Kind (PIK) Program: A Review of Its Costs, Benefits and Key Program Provisions".

The draft report was reviewed by the Assistant Secretary for Economics-Designate; the Agricultural Stabilization and Conservation Service (ASCS); Economic Research Service (ERS); Soil Conservation Service (SCS); Statistical Reporting Service (SRS); and the Office of Budget and Program Analysis (OBPA). The Assistant Secretary for Economics-Designate's remarks and staff comments from the foregoing agencies are included in the attachments.

It is our understanding this summary report was prepared in response to a Congressional request for an evaluation of the PIK program by the General Accounting Office. In this regard, we believe the attachments and other individually edited draft reports that were made available to your local GAO representatives will enhance the "reference" value of your report.

Sincerely,

A handwritten signature in cursive script that reads "Daniel G. Amstutz".

DANIEL G. AMSTUTZ
Under Secretary for International
Affairs and Commodity Programs

[GAO Note: The page references in the comments that follow have been changed to correspond to those in the final report.]

Enclosures

ASSISTANT SECRETARY FOR ECONOMICS-DESIGNATE¹

1. The most glaring deficiency in the report is that it attempts to calculate "costs" of the PIK Program without acknowledging that it accomplished one of the stated goals--minimizing budget outlays (Page 1). By ignoring the outlay savings (which are mentioned in passing as a "possibility" on Page 69, Appendix V) the GAO report presents a one-sided picture. It tends to support the popular misconception that PIK was a budget-buster and a major factor in the FY 83 outlays total of \$18.9 billion for CCC, which is, of course, not true.

[GAO note: This comment and our response to it are on pp. 36 and 37 of the report.]

2. This is demonstrated by some of the methods used to calculate the "costs" of the PIK Program. For instance, diversion payments--which had no direct connection to the PIK Program--are included as costs of PIK. It is true that more diversion payments were probably made with PIK than without. But some would have been made in any event, and the computation includes the total diversion payments. Conversely, it excludes the deficiency payments, which were reduced as a result of the PIK Program (and the drought). Similarly, the computation includes storage payments to participants but does not give credit for reduced CCC storage costs.

[GAO note: This comment and our response to it are on pp. 37 and 38 of the report.]

3. The computation of "costs" also includes interest foregone, assuming that interest would have been paid on all loan collateral used for PIK. This is, of course, not a valid assumption, particularly for FOR loans made at premium rates. These commodities would likely have been forfeited to CCC without payment of interest anyway.

[GAO note: This comment and our response to it are on p. 38 of the report.]

4. In summary, it appears that the GAO has attempted to compute a "cost" without clarifying what it is--realized losses? Outlays? Opportunity cost? As a result, it is a meaningless mixture of these concepts. It would have been more accurate and more fair to have compared estimated outlays and realized losses with and without the PIK Program.

¹Since these comments were obtained, the Assistant Secretary for Economics has been confirmed. Accordingly, we refer to this official as the Assistant Secretary for Economics in the report.

[GAO note: This comment and our response to it are on p. 38 of the report.]

5. The report also demonstrates a lack of familiarity with the timing of program outlays (Appendix I, Page 3), when it states that the FY 83 outlays of \$18.9 billion were generated by 1983 commodity programs. As you know, FY 83 outlays were primarily determined by 1982-crop programs. The budget confusion persists when the report (Appendix II, Page 18) talks about reimbursing CCC for realized losses through outlays rather than appropriations.

[GAO note: Pages 3 of app. I and 18 of app. II of the report were changed as suggested to reflect these comments.]

6. The report also seems to have inaccurate descriptions of some program terms--base acres (Appendix I, Page 5, and elsewhere) and the payment limitation (footnote, Appendix I, Page 3). These should be corrected.

[GAO note: Pages 3, 5, and all other places in the report where we refer to these points have been revised to reflect these comments.]

7. Finally, the report consistently speaks of CCC "forgiving" loans for PIK. CCC did not forgive loans. The loans were repaid. Then CCC repurchased the commodities and distributed them under PIK.

[GAO note: This comment and our response to it are on p. 38 of the report.]

AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE
(Budgetary Review)

1. On Page 18, the report refers to the costs of the PIK Program as losses to CCC. The report states:

"However, it should be noted that these assets will be written off by CCC and included as losses to CCC. As such, CCC may eventually have to be reimbursed for these losses through budget outlays in future fiscal years."

We feel that additional clarifications are advisable concerning this statement. CCC was advised by the General Accounting Office that 1983 crop PIK liabilities should be accounted for under Generally Accepted Accounting Principles related to proper accrual of costs. Therefore, CCC's obligations to deliver in-kind payments related to 1983 PIK contracts were recognized as 1983 costs (losses) and accrued based on the contracts signed by producers in FY 83. CCC losses are reimbursed through appropriations which do not involve additional budget outlays. Furthermore, 1983 PIK losses have already been reimbursed. The FY 83 Supplemental Appropriation and the FY 84 Continuing Resolution restored all the PIK losses of the corporation.

[GAO note: The clarifications suggested by ASCS have been made on p. 18 of the report.]

2. On Page 19, the report states that:

"We used these prices based on our assumption that the mix of loans forgiven for PIK would be the same as the mix of all loans as of April 30, 1983. This assumption was necessary because the actual mix of loans to be forgiven was (and is) not known."

The actual crop year mix of loans forgiven to meet PIK obligations is available from CCC accounting records (Supplemental FM-222R Summary Report of CCC Loans). However, the delineation of regular loan versus reserve loans is not available.

[GAO note: This comment and our response to it are on p. 19 of the report.]

3. On Page 26, the report notes that revenues to CCC from producer liquidated damages reflect actual liquidated damages paid by producers to CCC through September 30, 1984. The figures that were utilized in Tables 2 through 6 as "revenue to CCC from producer liquidated damages" included only FY 84 actual revenues. An additional \$1.2 million in FY 83 liquidated damages was inadvertently omitted by GAO.

[GAO note: USDA's comment is correct and appropriate changes have been made on pp. 21 through 25 of the report to reflect this information.]

4. On Page 27, the report refers to participation in the paid land diversion programs. The report states:

"For corn, grain sorghum, wheat, and rice the paid land diversion acres under PIK were higher than under the originally announced programs; for cotton they were less."

On Page 27, the report states:

"Together, the increased acres subject to diversion payments for these three commodities increased diversion payments by about \$323 million. About 97,000 fewer acres of cotton were subject to paid land diversion payments under PIK, which decreased diversion payments for these two crops by about \$12 million."

We feel that the references on Page 27 need to be revised to correspond to the statements on Page 27. The reference to "three commodities" should be changed to "four commodities" and the reference to "two crops" should be changed to "one crop."

[GAO note: The report has been revised as suggested.]

5. We do feel that the cost estimates that GAO used to determine the cost of CCC commodities and storage costs are reasonable based on the actual costs CCC has experienced to date.

NOTE: Other ASCS comments were noted on draft copies of the report that were furnished to local GAO representatives.

ECONOMIC RESEARCH SERVICE

Summary

- Page 1 There were versions of PIK in earlier years.
- Page 2 The definition of "base acres" may not be technically correct--base acres generally are not acres ASCS permits a farmer to plant as defined in this report; rather they are the planted or considered planted acres averaged over the last two years for payment purposes.

[GAO note: The report has been revised to reflect this concern.]

Page 4 It should be emphasized that in 1982, the rate of program participation was significantly attributed to the higher reserve loan rates. In the case of corn, for example, the reserve loan rate was set 35¢ per bushel higher than the regular CCC loan rate.

[GAO note: Page 57 of the report has been revised to reflect this point.]

Page 5 Under regular PIK, entitlements were made according to a prescribed percentage of the program yield, not actual yield as implied in this report.

[GAO note: We have clarified the report to reflect this concern.]

Appendix I: Background on the 1983 PIK Program

Page 1 The objectives of farm programs have not been fully stated. The programs have been historically designed to stabilize and enhance commodity prices and farm income, not just stabilize, as stated in this report.

[GAO note: We have revised the report as suggested.]

Page 2 The Food and Agriculture Act of 1981 authorized acreage reduction programs for those crops mentioned plus barley and oats. It could be made clearer that under a paid diversion program, farmers are paid at a specific diversion payment rate for an acre of land diverted from production regardless of market prices. Deficiency payments, by contract, are determined by the difference between the target price and the market price or the loan rate, whichever is greater. So when market prices are high, deficiency payments conceivably could become very small or even zero.

[GAO note: We have revised the referenced portion of the report to better distinguish between deficiency and diversion payments.]

Page 3 Footnote. If a producer owns three farms, total payments "to all farms" could exceed \$50,000 if the farmer has partners.

[GAO note: The footnote mentioned in this comment is no longer included in the report.]

Page 4 The PIK Program, through its effect on market prices, would reduce deficiency payments, contributing further to lower program costs.

[GAO note: Language has been included in the report to note this point.]

Page 5 The definition of "base acres" appears to be technically incorrect. See earlier remarks.

[GAO note: Revised language to make reference technically correct.]

Pages 7-9 To the extent that USDA met its PIK obligations by using outstanding loans (regular CCC and reserve loans), the forgone interest income can be legitimately regarded as a cost to the Government. This approach views the loss of a potential income stream (interest) as a cost. However, there is also a potential cost stream that offsets this forgone income. First, many outstanding loans would have been forfeited anyway, causing interest to be forgone. Second, large government stocks would have been held indefinitely without PIK, making CCC continue to pay storage charges to commercial storage facilities and suffer losses in deterioration of grain quality. This saving of storage payments to CCC should be recognized, since it offsets the forgone interest income. Also, the 7-month storage payment for reserve PIK would have been paid in the absence of PIK.

Further, valuing PIK at government acquisition cost assumes that without PIK these outlays could have been recovered. It is likely that they would not have been. Many retained government stocks would likely have been used for grants such as P.L. 480 and so on. The cost calculations consider added diversion payments, but there were also effects on deficiency payments. PIK could have made them higher by attracting participation and made them lower by raising market prices. Also, effects on costs in subsequent years are not accounted for even though PIK commodities can be viewed as forgone returns in future years. For example, an ERS study on PIK put the saving in price support loan outlays at more than \$3 billion in the FY 84 budget, another offset not considered in this report.

[GAO note: In subsequent discussions with ERS staff, they chose to drop this comment.]

Page 12 Cash payments in 1983 were still limited to \$50,000 per producer. Thus, the statement "we obtained data from USDA showing the number of producers that received payments of more than \$50,000 in 1983" is

misleading. What should have been stated is something like, "we obtained data from USDA showing the number of producers that would have received payments of more than \$50,000 in 1983 if the limit had not been in place."

[GAO note: We clarified p. 13 of the report to reflect this concern.]

Appendix II: Cost of the PIK Program

Corn	1.8 billion bu.	\$5.1 billion
Sorghum	179 billion bu.	.5
Wheat	537 billion bu.	2.1
Rice	4.6 billion pounds	.4
Cotton	4.2 million bales	1.1
TOTAL		\$9.2 billion

Earlier comments on Pages 7-9 apply here. Inclusion of additional costs is arbitrary (with possible exception of distribution and diversion costs) and does not consider offsetting effects.

[GAO note: As noted above, in subsequent discussions with ERS staff, they chose to drop this comment.]

Appendix III: Distribution of PIK Payments

We have no major comments on Appendix III, although we question the value of showing Table 15 (Page 52) knowing the percentage of acreage reduced is very closely related to the percentage of PIK payments received by farmers.

Appendix IV: Farmer Participation in PIK Compared to Earlier Acreage Reduction Programs

Page 57 A big factor for 1982 program participation was the higher reserve loan rates set for many program corps compared with regular CCC loan rates.

[GAO note: We added a footnote to p. 57 of the report to reflect this point.]

This report should also look at program participation for the 1983 program under: (1) ARP/PLD basic programs; (2) 10-30 percent regular PIK; and (3) whole-base PIK. Then indicate the differences in economic incentives that lead to higher program participation under PIK than under the ARP/PLD programs.

[GAO note: This comment and our response to it are contained on p. 58 of the report.]

Page 57 About 5 percent of all producers who participated in PIK received payments in excess of \$50,000. How did that happen? Is that cash payments plus the imputed value of PIK?

[GAO note: We clarified the report to better explain how this occurred.]

Appendix V: Analysis of the Whole-Base Bid PIK

Page 63 The methodology used to compare cost per acre between whole-base PIK and 10-30 percent PIK is confusing and unnecessarily complicated. Why not simply compute government payments per acre diverted as follows, using a 100-acre wheat base as an example?

	<u>10% PIK</u>	<u>30% PIK</u>	<u>Whole-base PIK</u>
Acres diverted ¹	30	50	100
Deficiency ²	\$1,547	\$1,105	\$ 0
Diversion ³	459	459	459
PIK ⁴	1,179	3,537	11,200
TOTAL	\$3,185	\$5,101	\$11,659
Cost/Acre	\$106.27	\$102.02	\$116.59

¹Includes 15/5 - ARP/PLD.

²\$.65 payment at 34 bushels/acre harvested.

³\$2.70 times 34 bushels/acre x 5 acres.

⁴PIK valued at loan rate of \$3.65 a bushel. Average bid for whole-base PIK used is 86 percent.

[GAO note: This comment and our response to it are contained on p. 69 of the report.]

Page 63 Note that a PIK whole-base bid of 80 percent may involve payments of fewer bushels of corn than a bid of 73 percent. It depends on farm program yields.

[GAO note: We have added language to the report reflecting this comment.]

Pages 63-69 The 1983 drought and PIK raised feed grain prices and eliminated deficiency payments. The drought's effect on farm prices makes a hindsight calculation overstate the cost of the whole-base PIK relative to the regular PIK, because no deficiency payments were

made. Thus, the per acre realized cost of the 10-30 program was much less than the expected cost before PIK and drought.

[GAO note: This comment and our response to it are contained on pp. 69 and 70 of the report.]

Page 66 In Table 20, "conversion" should be "conservation".

In addition to the foregoing ERS staff comments, the Administrator, ERS forwarded the following statement:

We believe the report to be generally accurate and fair. However, despite its title, the report contains almost no analysis of PIK's benefits. Another area of concern is the computation of the cost of PIK. The major part of PIK's cost was loan outlays that will never be repaid to the CCC. These potential repayments, which became PIK payments, represent foregone income to the CCC in FY 83 and in subsequent years. However, no other offsetting costs in future years as a consequence of PIK were considered, such as lower loan outlays and deficiency payments. Further, counting storage payments (such as the 7-month payment on PIK taken from reserve grain) and interest on outstanding loans used for PIK assume that these costs would not have been incurred in the absence of PIK. In PIK's absence, it is likely that storage costs would have been worse, and significant interest costs would have been incurred on loans that would have been forfeited instead of used for PIK.

[GAO note: In subsequent discussions with ERS staff, it was agreed that this comment should be dropped.]

SOIL CONSERVATION SERVICE

Summary

Page 6 Second paragraph, fourth sentence. Suggested rewording - "Recent projections made by ERS indicate that 93 percent of all soil conserved on farms participating in commodity programs during 1983 as well as"

[GAO note: The report has been clarified as suggested.]

Appendix VI

Page 73 The "all farms" heading should be explained as all participating farms to avoid confusion with "all" the farms in the United States.

[GAO note: The report has been clarified as suggested.]

option had existed. The number of acres taken out of production would have been less than our estimate if, contrary to our assumption, some whole-base bid participants would not have participated in the regular 10-30 program.

Finally, we estimated USDA's cost for the whole-base PIK option versus what it would have cost under the regular PIK option. To do this, we determined the amount of reduced production that was attributable to the whole-base bid acreage and the amount of production that was attributable to the acreage that would have been taken out of production if the whole-base PIK acres were converted to regular 10-30 PIK acres. The amount of reduced production was calculated by the average yield per acre for each crop. Again, this was done for both the whole-base PIK acres and the acres that would have been taken out of production if only a regular PIK program had existed. We then calculated USDA's cost for the reduced production for both the whole-base bid program and the 10-30 regular PIK program. This provided an estimate of USDA's total cost for all of the acreage taken out of production for each crop except rice. We then calculated a cost per acre for each crop for the whole-base bid program and for 10-30 PIK acres. We discussed our methodology with ASCS representatives in Kansas City and at USDA headquarters in Washington, D.C., who agreed with it. We discuss the details of our calculations, including the basis for our cost determinations, in appendix V.

Conservation impact of the PIK program

In reviewing this aspect of the PIK program, we obtained information on (1) the program's impact on soil and water conservation, (2) the conservation requirements formulated for PIK participants, (3) how the requirements were enforced, and (4) the extent to which farmers complied with the requirements.

To provide information on the amount of soil and water conserved as a result of the PIK program, we used information obtained from an ongoing evaluation of this issue being done by ERS. However, because final data were not yet available on the number of acres devoted to conservation uses as a result of participation in the 1983 farm programs, the data from ERS are based on a statistical sampling of farms. Appendix VI describes the error rates associated with the sampling plan used.

To determine whether any specific conservation requirements were formulated for PIK participants and how they were enforced, we identified and reviewed relevant ASCS documents, regulations, handbooks, and related reports on the administration and requirements of the PIK program. We supplemented this by interviewing ASCS officials responsible for this aspect of the PIK program. In addition, to clarify our understanding of the conservation requirements for PIK farmers, we discussed the PIK conservation program with officials of USDA's Soil Conservation Service.

To determine the degree to which participants complied with the PIK program's conservation requirements, we relied on the data and analysis done by USDA's OIG. We had to do this for three reasons. First, USDA does not require that program compliance data on conservation practices be reported to either state or national ASCS offices. Second, the requirements on the scope of compliance checks vary among states so that obtaining uniform data is difficult. And, third, since our review began in the fall of 1983, after the growing season for most of the PIK commodities had already ended, onfarm verification of the conservation practices followed was not possible. Consequently, since the OIG had already completed a review of farmer compliance with program requirements, we summarized the results of its review in this report.³

Adequacy of stock levels for meeting PIK payment requirements

Our objective was to evaluate USDA's plans for assuring the availability of adequate commodity stocks to meet its PIK payment obligations. To do this, we obtained and analyzed USDA's commodity inventory reports for all PIK commodities for the period October 29, 1982, when USDA began considering the PIK program, through May 27, 1983, when it discontinued the reports. The commodity inventory reports provided management with weekly updates of changes in the amounts of commodities held by and under loan to CCC. We compared the reports of available inventory with USDA's estimates of participation in the PIK program. The participation estimates provided management with indications of what their total PIK payment obligations would be. We also obtained and analyzed the proposals, working papers, and supporting documents prepared by USDA's staff, identifying options available to USDA in meeting its PIK obligations. In addition, we interviewed officials responsible for developing the PIK program in ASCS, ERS, and the Office of the Deputy Assistant Secretary for Economics to obtain their views and the rationales behind some of the program decisions made.

Justification for key program provisions

Our objective here was to evaluate USDA's rationale and justification for establishing PIK payment rates and the program's whole-base bidding provision. We obtained and analyzed the working papers and estimates prepared by ASCS staff and by ERS, which did much of the economic analysis on the PIK program in the program's formulative stages. In addition, we interviewed officials responsible for developing program provisions in ASCS and ERS, as

³The OIG report entitled the Agriculture Stabilization and Conservation Service Payment-In-Kind (PIK) Program: A Review of PIK Program Compliance and Effectiveness, Audit Report No. 3621-4-KC, dated Dec. 21, 1983.

well as the Deputy Assistant Secretary for Economics, to obtain their views on our findings and any additional information they might have.

COST OF THE 1983 PIK PROGRAM

On the basis of USDA's latest available estimates of PIK payment needs for corn, grain sorghum, wheat, rice, and cotton, we calculate that the 1983 PIK program cost between \$9.8 billion and \$10.9 billion. Nearly all of these costs represent government assets given up to meet PIK payment obligations to farmers and, for the most part, did not directly affect fiscal year 1983 budget outlays. The assets given up include payments receivable from farmer-owned commodities under government loans and government-owned commodities. Our cost estimate is based on the best data available from USDA records as of December 1984, and may change before the final cost is known. Our cost estimate includes only the government's PIK costs; it does not include costs to consumers and businesses. However, it should be noted that these assets will be written off by CCC and included as losses to CCC. As such, any reimbursement for these losses comes from appropriations.¹

We express PIK costs as a range because two elements used in determining PIK costs--storage costs and potential interest forgiven--can vary. Consequently, a single value cannot be assigned to these elements. The following table shows the cost elements used in making our estimate and the estimated minimum and maximum costs associated with each element:

Table 1Estimate of 1983 PIK Program Costs

<u>Cost element</u>	<u>Low estimate</u>	<u>High estimate</u>
	----- (billions) -----	
Cost of commodities	\$9.134	\$ 9.134
Storage costs	.107	.391
Diversion payments	.311	.311
Distribution of commodities	.175	.175
Potential interest forgiven	0	.820
Other	<u>.104</u>	<u>.104</u>
Estimated cost for 1983 PIK program	<u>\$9.831</u>	<u>\$10.935</u>

A detailed explanation of each cost element follows:

¹According to ASCS, all 1983 PIK losses have been reimbursed. An FY 1983 Supplemental Appropriation and an FY 1984 Continuing Resolution restored all of the losses to CCC.

COST OF PIK COMMODITIES

We estimate that the cost of commodities given to producers to meet PIK obligations was about \$9.134 billion. This estimate is based on USDA's latest available estimate of the quantities of PIK commodities needed to satisfy its obligations to farmers plus USDA's estimate of additional quantities needed to account for any differences between the quality of commodities given to farmers and the quality of the commodities required by the PIK program. For example, farmers entitled to number 2 grade corn in some cases were given lesser grade corn. In these instances, CCC had to make up for the quality difference by giving these farmers additional quantities of corn. On the basis of these estimates, USDA's total PIK obligations are estimated to be about 1.8 billion bushels of corn costing about \$5.083 billion, 179 million bushels of grain sorghum costing about \$521 million, 537 million bushels of wheat costing about \$2.083 billion, 4.6 billion pounds of rice costing about \$367 million, and 4.2 million bales (480 pounds equals 1 bale) of cotton costing about \$1.080 billion.

We based our commodity cost estimates on USDA's estimate of quantities needed to satisfy PIK obligations to farmers and also on the sources USDA used to fulfill its payment obligations. We priced these quantities at CCC's cost. The sources of the commodities used to pay PIK obligations varied. The first source for each crop was the farmer's own commodity that had been pledged as collateral for a CCC loan. In these cases, USDA forgave part or all of the loan (principal and interest), and the farmer retained the commodity as payment for PIK. If the PIK participant had no loan, then the commodity came from CCC's inventory stocks acquired either through normal loan forfeitures or through purchases from farmers who had commodities under loan that were not needed for their PIK entitlements. If the loans and CCC's inventory stocks were not sufficient to pay all PIK requirements, as was the case for wheat and cotton, selected producers were required to take out CCC loans on their 1983 crop and then, through immediate forfeiture of the loan collateral, used that crop as their PIK payment. This was labeled as the "harvest for PIK" program.

We determined the dollar value to be placed on the quantities needed for PIK from each source used for payment. For loans forgiven to meet PIK obligations, we first determined (1) all outstanding loans in effect as of April 30, 1983, that could possibly have been used for PIK and (2) the weighted average unit price for each commodity for these outstanding loans. We then determined the quantities of commodities under loans to be forgiven as a result of PIK and valued each of these commodities on the basis of the same weighted average unit price determined for all outstanding loans on that commodity. We used these prices on the basis of our assumption that the mix of loans forgiven for PIK would be the same as the mix of all loans as of April 30, 1983. This assumption was necessary because the actual mix of loans to be forgiven

was not known at the time of our review.² We chose the April 30, 1983, date because April was the last month prior to any unusual impact on loans from PIK activity, such as loan acquisitions, which are discussed below.

For the loan commodities that CCC purchased, we determined the weighted average unit price for each commodity using the same method discussed above. We then added the additional cost, or premium, USDA paid to farmers when it acquired these commodities. Although the crop years of the commodities purchased are known, we used the same weighted average unit prices that we used on the forgiven loans because some of the commodities, specifically wheat and grain sorghum, will be used for purposes other than PIK. Also, although the amount of commodities to be used for other purposes can be determined, their identity by crop year cannot. Consequently, because we could not differentiate between those commodities to be used for PIK and those that were not, we used a weighted average approach.

We valued PIK payments from CCC's inventory at the April 30, 1983, average unit cost to CCC, as computed by USDA, for commodities in CCC's inventory. We valued the 1983 wheat and cotton "harvest for PIK" loans at the 1983 weighted national average loan rate.

An alternative method of valuing the PIK commodities instead of their estimated cost to the government could have been at market values to farmers at the time they took possession of their PIK commodities. However, although market values may reflect actual commodity values to farmers, it would have been difficult and time consuming to ascertain when farmers actually took possession of their PIK commodities and the market values of those commodities, which varies in different geographical areas. The methodology we used to determine the value of the PIK commodities is based on what the commodities cost USDA and is representative of the cost to the federal government in making PIK commodity payments to farmers.

Our estimated cost is not the final cost that will be incurred to meet PIK obligations, but rather an estimated cost to the government of the commodities based on USDA's latest estimate of PIK requirements. The final cost and PIK requirements are not yet known. The following tables present our estimates of the cost of the commodities that will be used as PIK payments, on the basis

²Since the time of our review, these data have become available. However, we did not reflect the actual data in this report because it was the judgment of ASCS that there would not be much difference between our estimates and the actual figures.

of USDA's latest estimate of PIK payment requirements made on September 30, 1984. The total cost is \$9.134 billion.

Table 2

Estimate of the PIK Cost of Corn

	<u>Quantity</u>	<u>Unit cost</u>	<u>Total cost</u>
Corn (bu)			
Quantity needed as of 9/30/84	1,658,504,510		
Plus: quality adjust- ment needs	<u>119,200,000</u>		
Total needed	<u>1,777,704,510</u>		
Provided from:			
Producer loans	825,696,051	\$2.69441	\$2,224,763,696
Loan purchases	759,771,096	2.69441	2,047,134,838
Added cost of loan purchases ^a (133,265,111 bu. x \$2.69441)	-		359,070,848
CCC inventory ^b	<u>192,237,363</u>	2.36296	<u>454,249,199</u>
Total	<u>1,777,704,510</u>		<u>5,085,218,581</u>
Less: Revenues to CCC from producer liquidated damages ^c	-		<u>1,780,366</u>
Total	<u>1,777,704,510</u>		<u>\$5,083,438,215</u>

All footnotes are listed on pages 25 and 26.

Table 3Estimate of the PIK Cost of Grain Sorghum

	<u>Quantity</u>	<u>Unit cost</u>	<u>Total cost</u>
<u>Grain Sorghum (bu)</u>			
Quantity needed as of 9/30/84	165,714,339		
Plus: quality adjust- ment needs	<u>12,857,143</u>		
Total needed	178,571,482		

Provided from:			
Producer loans	83,912,113	\$2.69153	\$225,851,970
Loan purchases ^d	94,659,369	2.69153	254,778,531
Added cost of loan purchases ^d (15,037,377 bu. x \$2.69153)	<u>-</u>		<u>40,473,551</u>
Total	178,571,482		521,104,052
Less: Revenues to CCC from producer liquidated damages ^c	<u>-</u>		<u>306,907</u>
Total	178,571,482		<u>\$520,797,145</u>
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All footnotes are listed on pages 25 and 26.

Table 4

Estimate of the PIK Cost of Wheat

	<u>Quantity</u>	<u>Unit cost</u>	<u>Total cost</u>
<u>Wheat (bu)</u>			
Quantity needed as of 9/30/84	520,056,557		
Plus: quality adjust- ment needs	<u>16,500,000</u>		
Total needed	536,556,557		

Provided from:			
Producer loans	229,814,876	\$3.69474	\$ 849,106,215
Loan purchases ^d	166,990,672	3.69474	616,987,115
Added cost of loan purchases ^a (29,167,069 bu x \$3.69474)	-		107,764,737
"Harvest for PIK" 1983 loans	<u>139,751,009</u>	3.65	<u>510,091,183</u>
Total	<u>536,556,557</u>		<u>2,083,949,250</u>
Less: Revenues to CCC from producer liquidated damages ^c	<u>-</u>		<u>1,291,937</u>
Total	<u>536,556,557</u>		<u>\$2,082,657,313</u>

All footnotes are listed on pages 25 and 26.

Table 5

Estimate of the PIK Cost of Rice

	<u>Quantity</u>	<u>Unit cost</u>	<u>Total cost</u>
<u>Rice (lb)</u>			
Quantity needed as of 9/30/84	3,931,994,600		
Plus: quality adjust- ment needs	<u>640,000,000</u>		
Total needed	<u>4,571,994,600</u> =====		
Provided from:			
Producer loans	2,468,727,900	\$0.08174	\$201,793,819
CCC inventory ^b	<u>2,103,266,700</u>	0.07862	<u>165,358,828</u>
Total	<u>4,571,994,600</u>		<u>367,152,647</u>
Less: Revenues to CCC from producer liquidated damages ^c	<u>-</u>		<u>38,810</u>
Total	<u>4,571,994,600</u> =====		<u>\$367,113,837</u> =====

All footnotes are listed on pages 25 and 26.

Table 6

Estimate of the PIK Cost of Cotton

	<u>Quantity</u>	<u>Unit cost</u>	<u>Total cost</u>
<u>Cotton (bales)</u>			
Quantity needed as of 9/30/84	4,125,906		
Plus: quality adjust- ment needs	<u>30,000</u>		
Total needed	<u>4,155,906</u>		
Provided from:			
Producer loans	2,043,299	\$248.72225	\$508,213,925
Loan purchases	808,330	248.72225	201,049,656
Added cost of loan purchases ^a (174,896 bales x \$248.72225)	-		43,500,527
CCC Inventory ^b	768,055	242.71370	186,417,471
"Harvest for PIK" 1983 loans	<u>535,722</u>	264.00000	<u>141,430,608</u>
Total	<u>4,155,906</u>		<u>1,080,612,187</u>
Less: Revenues to CCC from producer liquidated damages ^c	<u>-</u>		<u>186,125</u>
Total	<u>4,155,906</u>		<u>\$1,080,426,062</u>
TOTAL			<u>\$9,134,432,572</u>

^aThe additional cost of loan purchases represents the premium USDA paid to producers when they purchased their loan collateral. The premium was paid in commodities. Accordingly, we multiplied the total premium paid for each commodity by our estimated unit cost to arrive at a total premium cost figure to USDA. There were no loan premiums for rice since USDA did not purchase any rice loans.

^bCalculated as the remaining quantity needed to satisfy PIK needs.

^cActual liquidated damages paid by producers to CCC through Sept. 30, 1984. Liquidated damages are penalties assessed by CCC on PIK producers who did not carry out the terms and conditions of their PIK contracts.

^dAnother 50 million bushels of grain sorghum valued at about \$134 million and another 58 million bushels of wheat valued at about \$214.8 million were purchased under the loan acquisition program but were not used to fulfill PIK needs. Instead, these commodities will probably be used to meet other farm program requirements. The Department also paid a premium to acquire these commodities. The extra sorghum cost about \$21.3 million more than the average loan rate, and the extra wheat cost about \$37.5 million more.

STORAGE COSTS

Under the PIK program, USDA paid all farmers for up to 5 months of storage after the date when their PIK commodities became available to them. This was done to permit farmers a period of time to get their commodities out of storage and into the marketplace in an orderly manner. Also, USDA paid an additional 7-months storage compensation to farmers who had commodities stored on the farm in a special type of loan account called a farmer-owned reserve. Of course, the payments for commodities held in the farmer-owned reserve were made only if the commodities were to be used to meet PIK obligations. These reserve loans are designed to keep the commodities in storage for an extended period of time. USDA paid the additional 7-month storage compensation because of the cost many of these farmers incurred for constructing onfarm storage facilities for commodities placed in the reserve. The 7-month storage costs were paid regardless of when the farmers disposed of their PIK commodities. Together, the up-to-5-month and the 7-month storage payments resulted in an estimated PIK cost ranging from about \$107 million to \$391 million.

The lower amount--\$107 million--is the additional 7-month storage compensation paid to farmers who had reserve loan commodities stored on their farms. This estimated amount was paid by USDA regardless of how long the PIK commodities were actually stored on the farm. The cost for the up-to-5-month storage depended on the time at which farmers took delivery of their PIK commodities. If all farmers took possession immediately after they were entitled to the commodities, no 5-month storage costs would have been incurred. However, if all farmers waited the entire 5-month period, then storage costs would have been about \$284 million. In the latter case, this would have increased the total storage costs under PIK to about \$391 million.

DIVERSION PAYMENTS

To be eligible to participate in the PIK program, farmers were required to enroll in the paid land diversion program for

each PIK crop except cotton, which was optional. Under a paid land diversion program, farmers receive direct cash payments, at a specified rate, for taking a certain percentage of their cropland out of production.³ These payments are called diversion payments. Because more farmers participated in the PIK program than signed up for the originally announced 1983 farm programs, more farmers received diversion payments. We estimate \$311 million in increased diversion payments as a result of the PIK program.⁴

In determining the increase in diversion payments as a result of PIK, we relied heavily on USDA's commodity analysts' estimates of what the participation, and thus the number of paid land diversion acres, would have been under the originally announced programs for wheat, corn, grain sorghum, rice, and cotton and compared their estimates with the actual program participation for each crop in PIK. For corn, grain sorghum, wheat, and rice, the paid land diversion acres under PIK were higher than under the originally announced programs; for cotton they were less. About 1.7 million more acres of corn, 153,000 more acres of grain sorghum, 304,000 more acres of wheat, and 26,000 more acres of rice were subject to paid land diversion payments under PIK as compared with the estimates under the original programs. Together, the increased acres subject to diversion payments for these four commodities increased diversion payments by about \$323 million. About 97,000 fewer acres of cotton were subject to paid land diversion payments under PIK, which decreased diversion payments for that crop by about \$12 million. The net result is an increase in diversion payments of \$311 million for participants in the PIK program.⁵

The reason for the relatively large decrease in cotton acres was that the cotton diversion program was voluntary under PIK, whereas the diversion programs were required for the other crops.

³The actual paid land diversion acres set aside is based on the latest USDA status report as of March 31, 1984, and represents about 95 percent of actual data. The final status report reflecting 100 percent actual data is not yet available. As a result, some additional diverted acres may have been enrolled in the 1983 PIK program that could increase diversion payments further.

⁴The paid land diversion payment rates vary by commodity. For the 1983 program, they were \$1.50 per bushel of corn, \$1.50 per bushel of grain sorghum, \$2.70 per bushel of wheat, \$0.027 per pound of rice, and \$0.25 per pound of cotton.

⁵While diversion payments increased as a result of the PIK program, deficiency payments may have increased or decreased from those that would have been made under the originally announced program in 1983. Our estimate does not reflect the increase or decrease in deficiency payments that may have occurred.

According to the USDA cotton analyst, cotton farmers had the choice of setting aside part of their land and receiving diversion payments or also placing that portion of the land under the PIK component of the program. The analyst said that the payments under the PIK component were much more attractive to the farmers than the payments under the diversion program. As a result, most farmers, who under the originally announced cotton program would have entered the diversion program, elected to place the land under the PIK component and receive PIK payments.

DISTRIBUTION COSTS OF PIK COMMODITIES

USDA paid about \$175 million to distribute PIK commodities to farmers. About \$170 million represents premiums, discussed below, paid to commodity dealers to execute corn, grain sorghum, and wheat commodity exchanges with USDA in areas where USDA did not have sufficient commodities to pay farmers. About \$5 million represents payments made by USDA to corn and grain sorghum farmers to assist them in transporting their PIK commodities.

USDA was obligated to provide PIK commodities as near as possible to a warehouse designated by each farmer. This was not a problem for rice and cotton stocks. However, stocks needed to meet PIK obligations for corn, grain sorghum, and wheat were not always located where they were needed. Consequently, instead of transporting PIK commodities to the locations needed, USDA chose whenever possible to exchange its commodities for commodities owned by private commodity dealers in the needed locations. For example, a dealer would offer to meet USDA's PIK obligations of 50,000 bushels of wheat in a needed location in exchange for ownership of 55,000 bushels of CCC wheat of the same grade located elsewhere. The difference of 5,000 bushels represents the cost or premium to CCC for the exchange. In total, USDA exchanged about 323.8 million bushels of its corn, 27.5 million bushels of grain sorghum, and 82.4 million bushels of wheat and received about 275.1 million bushels of corn, 24.9 million bushels of grain sorghum, and 77.2 million bushels of wheat from dealers in the needed locations. This resulted in USDA's paying premiums of 48.7 million bushels of corn, 2.6 million bushels of grain sorghum, and 5.2 million bushels of wheat. Using our estimates of the unit costs of these commodities to CCC, the value of these premiums amounts to about \$170 million. In addition to the exchanges, however, we identified one actual shipment of grain that was specifically made to meet PIK requirements. In this case, about 307,000 bushels of corn were shipped from Missouri to Texas at a cost to USDA of about \$245,000.

Even after the exchange program, USDA could not obtain sufficient quantities of corn and grain sorghum close enough to some farmers. As a result, USDA paid farmers an estimated \$5 million in transportation assistance to get the commodities close enough to the farmers' preferred locations.

POTENTIAL LOST INTEREST COST

Producers who took out regular and reserve loans under the CCC price-support program are generally charged interest on their loans. For regular loans, interest is usually charged for the 9-month loan period. For reserve loans, which are issued for 3 years and can be extended for an additional 2 years, interest is charged for only the first year. When commodity prices are high, producers would most likely repay their loans, including interest, at or before the end of the loan period so that they could sell their commodities in the market. When commodity prices are low, producers tend to hold their loans until maturity and to forfeit their loan collateral at that time rather than pay off the loans. When loan collateral is forfeited, the producer is no longer responsible for paying either the loan principal or accrued interest. Consequently, CCC receives no interest from farmers on forfeited loans. Accordingly, if producers would not have repaid the loans that were forgiven because of PIK, there would be no forgiven interest cost. However, if these loans would have been repaid eventually, then USDA would have the potential interest, which could have been as high as \$820 million.

USDA met its PIK obligations to participants who had outstanding regular and reserve loans by forgiving their outstanding loans in proportion to their PIK payments. In addition, for four of the five PIK crops, USDA purchased additional wheat, corn, grain sorghum, and cotton from farmers with outstanding loans to meet its PIK obligations. USDA paid the farmers for these additional purchases by forgiving the farmers' outstanding loans. When it forgives loans, USDA forgoes any opportunity to recapture the interest farmers owe on these loans. Therefore, this forgiven interest income should, in our opinion, be considered a PIK cost.

In determining the amount of loans with potential forgiven interest, we used (1) the actual amount of the loans, by crop year, that were forgiven as a result of USDA's additional purchases and (2) an estimate of the amount of loans forgiven to meet farmers' PIK payments from outstanding loans. To estimate the amount of these loans, we determined the universe of outstanding loans, by crop year, as of April 30, 1983, and then weighted the loans that would be forgiven, by crop year, in the same proportion as that reflected in the April 30, 1983, loan figures. The crop year of a loan is important because loan rates vary from year to year, and the interest charges due USDA also vary depending on the year the loan was made.

The interest rates we used in calculating the potential interest forgiven were based on USDA's interest schedules, which showed the various interest charges by crop year. For crop year 1976 through year 1980 loans, the interest rate was fixed for the life of the loan, and the interest rates tended to remain the same for the entire crop year. Beginning with crop year 1981 loans, variable monthly interest rates were charged on the basis of

interest rates the U.S. Treasury charged CCC during the month the loan was disbursed. In addition, the interest rates on outstanding 1981 and subsequent crop-year loans are reviewed each January and increased or decreased to reflect U.S. Treasury rates at that time. Because most outstanding loans would carry the January rate, we based interest rates for crop year 1981 and 1982 loans on the January interest rate the U.S. Treasury charged CCC in the applicable year.

Since all regular loans except those for rice have a maturity of 9 months, we calculated the potential interest forgiven on all corn, grain sorghum, and wheat loans for a 9-month period. Because 1980 and 1981 regular cotton loans have been extended and continue to accrue interest, the potential interest forgiven on these loans is based on 29 months for 1980 loans and 17 months for 1981 loans. Since rice loans have a common maturity date of April 30 of each year, and the majority of these loans are issued by October of each year, the potential interest forgiven was calculated for a 7-month period. The potential interest forgiven on reserve loans was based on 1 year. All interest rate calculations were based on simple interest and were not compounded.

The following tables summarize the potential forgiven interest associated with loans forgiven as a result of the 1983 PIK program:

Table 7
Computations of Potential Interest Forgiven on PIK Loans

	Loan forfeitures	Acquisitions from farmers	Value of loans forgiven ^a	Loan values subject to interest	Interest rate	Potential forgiven interest
					(percent)	(thousands)
----- (thousands) -----						
Corn						
Regular loans:						
1981	\$ 28,534	\$ 20,248	\$ 48,782	\$ 48,782	13.1	\$ 4,793
1982	121,752	48,217	169,969	169,969	9.0	11,473
Total	150,286	68,465	218,751	218,751		16,266
Reserve loans:						
1976 ^b	120	13	133	133	7.5	10
1977	4,731	4,081	8,812	8,812	6.0	529
1978	3,595	3,381	6,976	6,976	7.0	488
1979	4,190	3,327	7,517	7,517	9.0	677
1980	30,615	26,196	56,811	39,926 ^c	11.5	4,591
1981	951,800	1,190,843	2,142,643	2,142,643	13.1	280,686
1982	1,079,422	1,103,656	2,183,078	2,183,078	9.0	196,477
Total	2,074,473	2,331,497	4,405,970	4,389,085		483,458
Total	\$2,224,759	\$2,399,962	\$4,624,721	\$4,607,836		\$499,724
	=====	=====	=====	=====		=====

All footnotes are listed on page 35.

Table 8

Computations of Potential Interest Forgiven on PIK Loans

	<u>Loan forfeitures</u>	<u>Acquisitions from farmers</u>	<u>Value of loans forgiven^a</u>	<u>Loan values subject to interest</u>	<u>Interest rate</u>	<u>Potential forgiven interest</u>
	----- (thousands) -----				(percent)	(thousands)
<u>Grain sorghum</u>						
Regular loans:						
1981	\$ 789	\$ 1,527	\$ 2,316	\$ 2,316	13.1	\$ 228
1982	<u>3,734</u>	<u>6,650</u>	<u>10,384</u>	<u>10,384</u>	9.0	<u>701</u>
Total	<u>4,523</u>	<u>8,177</u>	<u>12,700</u>	<u>12,700</u>		<u>929</u>
Reserve loans:						
1980	4,145	5,528	9,673	9,502 ^c	11.5	1,093
1981	101,222	207,924	309,146	309,146	13.1	40,498
1982	<u>115,964</u>	<u>228,855</u>	<u>344,819</u>	<u>344,819</u>	9.0	<u>31,034</u>
Total	<u>221,331</u>	<u>442,307</u>	<u>663,638</u>	<u>663,467</u>		<u>72,625</u>
Total	<u>\$225,854</u> =====	<u>\$450,484</u> =====	<u>\$676,338</u> =====	<u>\$676,167</u> =====		<u>\$73,554</u> =====

All footnotes are listed on page 35.

Table 9
Computations of Potential Interest Forgiven on PIK Loans

	Loan forfeiture	Acquisitions from farmers	Value of loans forgiven ^a	Loan values subject to interest	Interest rate	Potential forgiven interest
					(percent)	(thousands)
-----((thousands))-----						
<u>Wheat</u>						
Regular loans:						
1981	\$ 9,496	\$ 7,826	\$ 17,322	\$ 17,322	13.1	\$ 1,702
1982	38,015	34,012	72,027	72,027	9.0	4,862
Total	47,511	41,838	89,349	89,349		6,564
Reserve loans:						
1976 ^d	4,618	36	4,654	4,654	7.5	349
1977	9,794	459	10,253	10,253	6.0	615
1978	7,165	288	7,453	7,453	7.0	522
1979	12,894	1,455	14,349	14,349	9.0	1,291
1980	134,814	123,656	258,470	40,701 ^c	11.5	4,681
1981	168,595	229,639	398,234	398,234	13.1	52,169
1982	463,714	610,961	1,074,675	1,074,675	9.0	96,721
Total	801,594	966,494	1,768,088	1,550,319		156,348
Total	\$849,105	\$1,008,332	\$1,857,437	\$1,639,668		\$162,912
	=====	=====	=====	=====		=====

All footnotes are listed on page 35.

Table 10

Computations of Potential Interest Forgiven on PIK Loans

	<u>Loan forfeiture</u>	<u>Acquisitions from farmers</u>	<u>Value of loans forgiven^a</u>	<u>Loan values subject to interest</u>	<u>Interest rate</u>	<u>Potential forgiven interest</u>
	----- (thousands) -----				(percent)	(thousands)
<u>Rice</u>						
Regular loans:						
1982 (Total)	\$201,794 =====	-	\$201,794 =====	\$201,794 =====	9.0	\$ 10,594 =====

All footnotes are listed on page 35.

Table 11
Computations of Potential Interest Forgiven on PIK Loans

	<u>Loan forfeitures</u>	<u>Acquisitions from farmers</u>	<u>Value of loans forgiven^a</u>	<u>Loan values subject to interest</u>	<u>Interest rate</u>	<u>Potential forgiven interest</u>
					(percent)	(thousands)
<u>Cotton</u>						
Regular loans:						
1980	\$ 7,795	\$ 629	\$ 8,424	\$ 8,424	11.5	\$ 2,220
1981	217,089	9,750	226,839	226,839	13.1	35,898
1982	<u>283,330</u>	<u>242,709</u>	<u>526,039</u>	<u>526,039</u>	9.0	<u>35,508</u>
Total	\$ 508,214	\$ 253,088	\$ 761,302	\$ 761,302		\$ 73,626
	=====	=====	=====	=====		=====
Total all commodities	\$ 4,009,726	\$ 4,111,866	\$ 8,121,592	\$ 7,886,767		\$ 820,410
	=====	=====	=====	=====		=====

^aTotal may not add because of rounding.

^bFinal settlement date for called corn reserve loans in reserves I, II, and III which had to be settled by May 31, 1983. Settlement was required for all corn reserve loans except those designated for PIK or accepted under the acquisition program.

^cThe total 1980 crop reserve loans have been adjusted on the basis USDA estimates to reflect interest-free 1980 crop loans in reserves II and III.

^dSome 1976 crop loans entered the reserve program in 1978 and matured in January 1983. These loans can be extended beyond their maturity date and used for PIK.

OTHER PIK COSTS

In addition to the major PIK cost components already discussed, USDA also incurred some other PIK costs. These were \$46 million for transferring farm-stored commodities that USDA purchased under its PIK commodity acquisition program into warehouses and \$58 million for additional personnel, travel, and related costs needed to administer the PIK program.

AGENCY COMMENTS AND
OUR EVALUATION

USDA's Assistant Secretary for Economics (ASE), ASCS, and ERS provided us with several comments on our PIK cost calculations. Overall, the comments raised points of balance and clarification. There were also some comments that suggested changes be made to the report. A discussion of each substantive comment and how we handled them follows. Those comments of an editorial nature were handled as appropriate and are not discussed here.

Comments from the Assistant
Secretary for Economics

USDA's ASE commented that in calculating the cost of the PIK program, we did not acknowledge that it accomplished one of its stated goals, which was to minimize budget outlays. According to the ASE, this omission does not present a balanced picture of the program.

The observation that our report does not acknowledge that the PIK program minimized budget outlays is correct. The reason for this is that in establishing the objective of minimizing government farm program budget outlays, USDA said it would take several years for budgetary savings to be realized. USDA expected that the full impact of the PIK program on commodity prices and, in turn, on USDA price and income support payments would not be known until about 1986. Accordingly, it was necessary for USDA to project the impact of the PIK program on budget outlays. It did this by making certain assumptions which could have a major impact on farm program budget outlays but which were difficult to predict through 1986. These assumptions included (1) weather conditions, which have a direct impact on crop production, (2) domestic and foreign demand for the nation's agricultural products, (3) foreign production of commodities, and (4) the strength or weakness of the dollar. Since USDA established its objective of minimizing budget outlays in 1983, a major drought has occurred, foreign demand for domestic agricultural products has declined, and the value of the dollar has risen dramatically relative to other currencies. Because USDA's budget outlay estimates did not include these factors, we cannot determine whether or not the PIK program will, in fact, minimize budget outlays. Consequently, we did not acknowledge it in the report.

Regarding the Assistant Secretary's observation that our analysis supports the popular misconception that the PIK program was a budget buster, our only comment is that the intent of the report is to provide our estimate of the total cost of the 1983 PIK program. Whether the program was a budget buster is a judgment we do not want to imply or make.

In addition, the ASE commented that in calculating our PIK cost estimates, we included "total diversion payments." On the basis of this comment, he asserts that we should not have done this since some diversion payments would have been made with or without a PIK program. On the other hand, the ASE recognizes that more diversion payments were made under the PIK than would have been made without it. It appears, however, that the ASE may have misread our cost estimates on this point since we estimated the 1983 diversion costs attributable to the PIK program just as his comment suggests. That is, we included only those diversion costs estimated to be directly due to the PIK program. Specifically, in discussing our estimate of the amount of diversion payments attributable to the PIK program, page 27 of our report states that "Because more farmers participated in the PIK program than signed up for the originally announced 1983 farm programs, more farmers received diversion payments. We estimate \$311 million in increased diversion payments as a result of the PIK program." [Emphasis added.]

Further, the ASE commented that our cost estimates excluded deficiency payments, which he asserts were reduced as a result of the PIK program. However, in our opinion, the impact PIK had on market prices and, in turn, deficiency payments is unclear. While PIK may have increased market prices by reducing supplies of the major commodities covered by the program, it also may have had the effect of inducing greater participation in 1983 farm programs. Greater participation would tend to increase the total amount of deficiency payments since such payments can be made only to farmers participating in the program. As a result, it is very difficult to estimate the impact of PIK on the total amount of deficiency payments. Since USDA could not provide us with the evidence to support this assertion, we did not include it in the report. In fact, this point is further complicated by the occurrence of a drought in the summer of 1983 which had, like PIK, the effect of reducing supplies of PIK commodities. It is not clear how USDA can assert that reduced deficiency payments were due only to PIK.

Regarding the ASE's comment that we did not give credit for reduced CCC storage costs owing to PIK, we do not believe a change to our estimates is warranted on this point. The organizational unit within USDA responsible for tracking commodity storage costs assisted us in developing our methodology on this aspect of our cost estimates. This same group--the ASCS budget group--in commenting on this report said that ". . . the cost estimates that GAO used to determine . . . storage costs are reasonable based on

the actual costs CCC has experienced to date." Since, in our opinion, the estimates now in the report accurately reflect the storage costs incurred by CCC as a result of PIK, and since the organizational unit in USDA responsible for these cost data believes our estimates are accurate, we see no need to change the report on the basis of this comment.

The ASE contends that our estimate of the potential interest forgiven by CCC assumes that interest would have been paid on all of the loan collateral used for PIK. He further states that this is not a valid assumption since some loan collateral--particularly for farm-owned reserve (FOR) loans made at premium rates--would have been forfeited to CCC without payment of interest anyway. We agree with this latter comment regarding the likelihood that some loans would have been forfeited to CCC without any interest payments. But our estimates already reflect this likelihood by giving a range for this element of our estimate. Specifically, as table 1 on page 18 of our report shows, the amount of interest forgiven under the PIK program could have been as low as "0" or as high as \$820 million, depending on the amount of loans and interest repaid. Consequently, we see no need to change our cost estimates on this point.

On the basis of the preceding comments, the ASE commented that our cost estimates represent a meaningless mixture of concepts that need clarification as to whether we are estimating realized losses, outlays, or opportunity costs. However, for the reasons noted in response to the previous comments, we do not believe this comment is merited.

The ASE's final comment related to our references to CCC's "forgiving loans" as part of the PIK program. According to the ASE, CCC did not forgive loans but "repurchased" the commodities under loan and distributed them as PIK payments. This comment, however, is somewhat confusing. Throughout our work on the PIK program over the past 2 years, we have had extensive discussion with ASCS and ERS officials about this aspect of the program. Throughout those discussions, it was generally accepted that USDA forgave the loans as part of the PIK program. This is demonstrated in ASCS' comments on this report. Specifically, in commenting on page 19 of the report, ASCS uses the term "loans forgiven" in its discussion of the loan program. Consequently, we see no need to revise the report on this point.

Comments from ASCS

Overall, ASCS commented that the commodity and storage cost estimates in the report were reasonable. In addition, they offered some specific comments.

ASCS suggested that page 18 of the report be clarified to note that losses realized by CCC are to be reimbursed by appropriations

from the Congress and that all 1983 PIK losses have already been reimbursed. We have revised the report on this point as suggested by ASCS.

Regarding our estimates of the value of the loans forgiven to meet PIK payment obligations, ASCS comments suggested that the report be revised to note that the actual crop year mix of loans forgiven for PIK are now known. Page 18 of the draft submitted to ASCS stated that the mix of loans was not known. Accordingly, we clarified the report to note that the actual mix of loans was not known at the time we did our review. Also, we added a footnote to the report stating that since the time of our review, these data have become available.

DISTRIBUTION OF PIK PAYMENTS

This appendix provides detailed information on the distribution of PIK payments to participating farmers throughout the country. We obtained the information by farm size and by the type of farm ownership. In gathering the information by type of farm ownership, we determined whether the PIK payments went to farms owned by individuals or organizations like corporations or partnerships. In addition, we determined whether the PIK payments received by the various farm sizes were proportional to their contributions to reduced acreage.

The latest available data at the time of our review were as of July 27, 1984, and were about 96 percent complete. The information shows that about 1.03 million farms owned by about 831,750 producers received PIK payments.

VALUE OF PIK PAYMENTS AND
DISTRIBUTION BY FARM SIZE

As table 12 shows, based on the actual data available during our review, the total PIK payments had a value of about \$8.8 billion.¹ This figure is based on our estimated cost of PIK commodities to the government.

Table 12 also shows that nearly 30 percent of the PIK payments went to farms having 200 or less acres of cropland. Similarly, 30 percent went to farms between 201 to 500 acres, and about 40 percent went to larger farms having more than 500 acres. Farms of 200 acres or less accounted for about 61 percent of all farms; farms of 201 to 500 acres represented about 26 percent; and the largest farms, those of more than 500 acres, represented about 13 percent.

¹This figure differs from the figure used in appendix II because it is based on actual data as of July 27, 1984. The \$9.1 billion figure used in estimating the cost of PIK commodities in appendix II, however, is an estimate of what the final PIK cost will be. Accordingly, the \$9.1 billion figure represents an estimate of 100 percent of the commodity costs.

Table 12
 Distribution of PIK Payments by Farm Size

Cropland acres on farms	Item	Corn		Grain sorghum		Wheat		Cotton		Rice		U. S. total by farm size	
		Quantity	U.S. %	Quantity	U.S. %	Quantity	U.S. %	Quantity	U.S. %	Quantity	U.S. %	Quantity	U.S. %
100 or less	Number of farms	209,196	61.6	23,623	7.0	74,499	21.9	28,746	8.5	3,549	1.0	339,613 ^b	32.9 ^b
	PIK value at cost ^a	\$ 632,404	71.6	\$ 37,948	4.3	\$ 133,974	15.2	\$ 67,966	7.7	\$ 11,114	1.3	\$ 883,406	10.0
101 to 200	Number of farms	158,621	55.8	27,393	9.6	74,716	26.3	20,678	7.3	2,978	1.0	284,386 ^b	27.6 ^b
	PIK value at cost ^a	\$ 1,127,698	71.1	\$ 80,507	5.1	\$ 243,895	15.4	\$ 113,931	7.2	\$ 20,675	1.3	\$ 1,586,705	18.0
201 to 300	Number of farms	70,887	51.8	14,262	10.4	40,067	29.3	9,849	7.2	1,903	1.4	136,978 ^b	13.3 ^b
	PIK value at cost ^a	\$ 795,318	69.1	\$ 57,303	5.0	\$ 193,155	16.8	\$ 85,268	7.4	\$ 20,415	1.8	\$ 1,151,459	13.0
301 to 400	Number of farms	35,851	43.3	9,994	12.1	27,483	33.2	8,006	9.7	1,481	1.8	82,815 ^b	8.0 ^b
	PIK value at cost ^a	\$ 553,794	61.5	\$ 54,485	6.0	\$ 176,526	19.6	\$ 94,959	10.5	\$ 21,188	2.4	\$ 900,952	10.2
401 to 500	Number of farms	19,519	40.1	5,850	12.0	17,966	36.9	4,259	8.8	1,048	2.2	48,642 ^b	4.7 ^b
	PIK value at cost ^a	\$ 371,528	58.0	\$ 38,415	6.0	\$ 146,626	22.9	\$ 65,194	10.2	\$ 18,420	2.9	\$ 640,183	7.2
501 to 1000	Number of farms	31,570	33.5	12,131	12.9	38,872	41.2	8,980	9.5	2,813	3.0	94,366 ^b	9.1 ^b
	PIK value at cost ^a	\$ 861,642	49.6	\$ 112,006	6.5	\$ 475,598	27.4	\$ 212,711	12.3	\$ 73,834	4.3	\$ 1,735,791	19.6

^aIn thousands of dollars.

^bSome farms are counted more than once because they have more than one PIK crop and are counted for each crop.

Table 12 (continued)
 Distribution of PIK Payments by Farm Size

Cropland acres on farms	Item	Corn		Grain Sorghum		Wheat		Cotton		Rice		U. S. total by farm size	
		Quantity	U.S. %	Quantity	U.S. %	Quantity	U.S. %	Quantity	U.S. %	Quantity	U.S. %	Quantity	U.S. %
1,001 to 1,500	Number of farms	6,864	28.1	3,235	13.2	10,999	45.0	2,278	9.3	1,073	4.4	24,449	2.4b
	PIK value at cost ^a	296,378	40.7	44,730	6.1	242,719	33.4	96,241	13.2	47,707	6.6	727,775	8.2
1,501 to 2,000	Number of farms	2,352	25.0	1,244	13.2	4,350	46.3	927	9.9	477	5.1	9,390	0.9b
	PIK value at cost ^a	134,676	35.3	23,961	6.3	139,024	36.5	59,042	15.5	24,597	6.5	381,300	4.3
2,001 to 2,500	Number of farms	1,050	24.6	587	13.8	1,990	46.6	401	9.4	241	5.6	4,269	0.4b
	PIK value at cost ^a	72,182	32.7	13,481	6.1	81,611	37.0	35,901	16.3	17,429	7.9	220,604	2.5
2,501 or more	Number of farms	1,399	21.4	881	13.5	3,000	45.9	786	12.0	472	7.2	6,538	0.6b
	PIK value at cost ^a	132,714	21.7	31,151	5.1	229,008	37.5	155,487	25.4	62,724	10.3	611,084	6.9
U.S. Total ^c	Number of farms	537,309	52.0	99,200	9.6	293,942	28.4	84,910	8.2	16,035	1.5	1,031,396	
	PIK value at cost ^a	4,978,334	36.3	493,987	5.5	2,062,136	23.3	986,700	11.1	318,102	3.5	8,839,260	

^aIn thousands of dollars.

^bSome farms are counted more than once because they have more than one PIK crop and are counted for each crop.

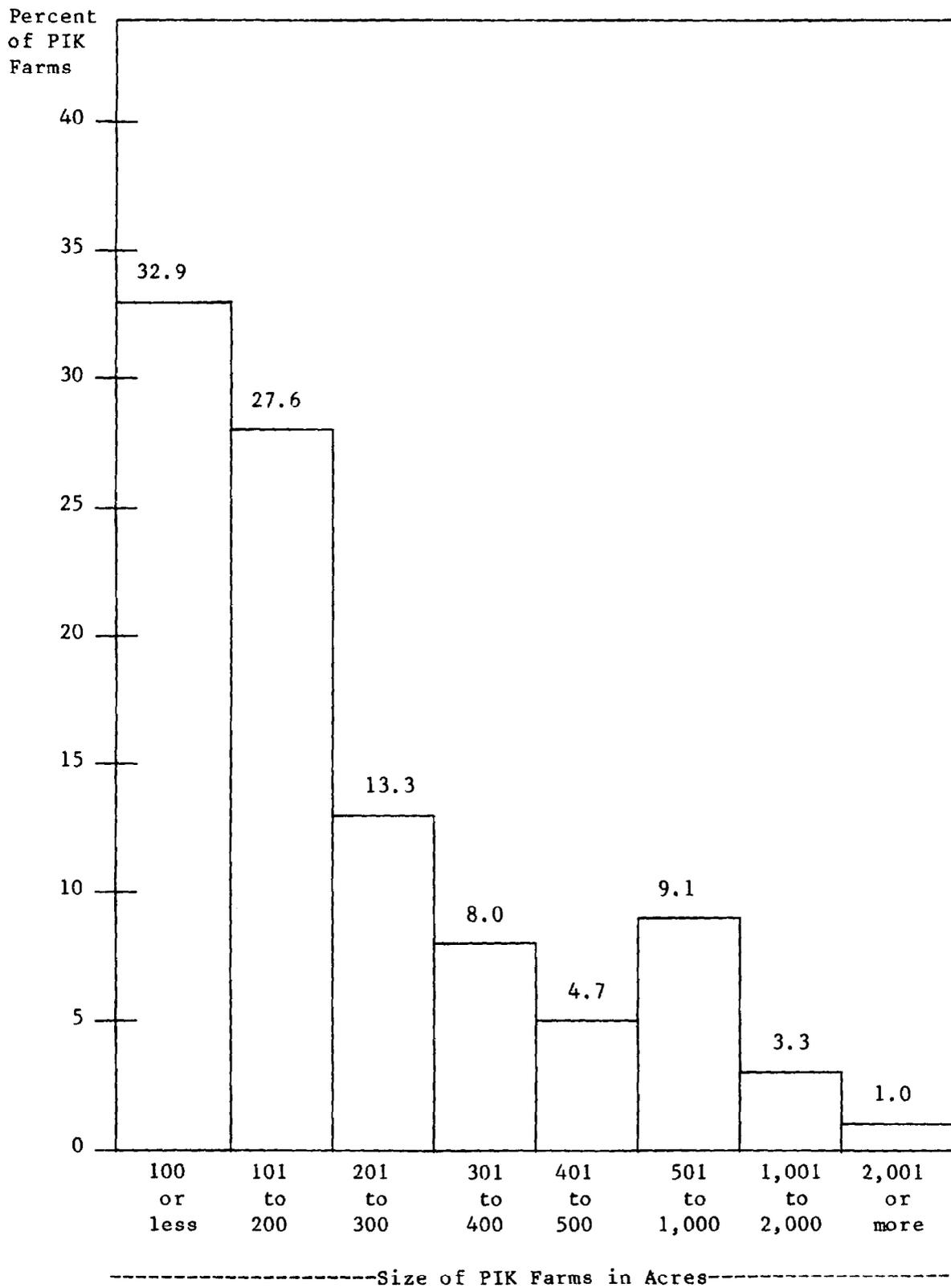
^cMay not add because of rounding.

The table shows that about 52 percent of all farms that participated in the PIK program were corn farms, more than any other crop. Wheat farms were the second most numerous, comprising about 28.4 percent of the total number of farms in PIK. These were followed by grain sorghum (9.6 percent), cotton (8.2 percent), and rice (1.5 percent). However, while rice farms were fewest in number, on average they received the highest PIK payments. On the basis of the cost of PIK commodities, rice farmers received an average payment of about \$19,838. Rice was followed in descending order of payments by cotton (\$11,621), corn (\$9,265), wheat (\$7,015), and grain sorghum (\$4,980).

In addition to the numerical data contained in table 12, the following figure graphically depicts the distribution of PIK payments by farm size for each of the major farm size populations in our analysis.

Figure 1

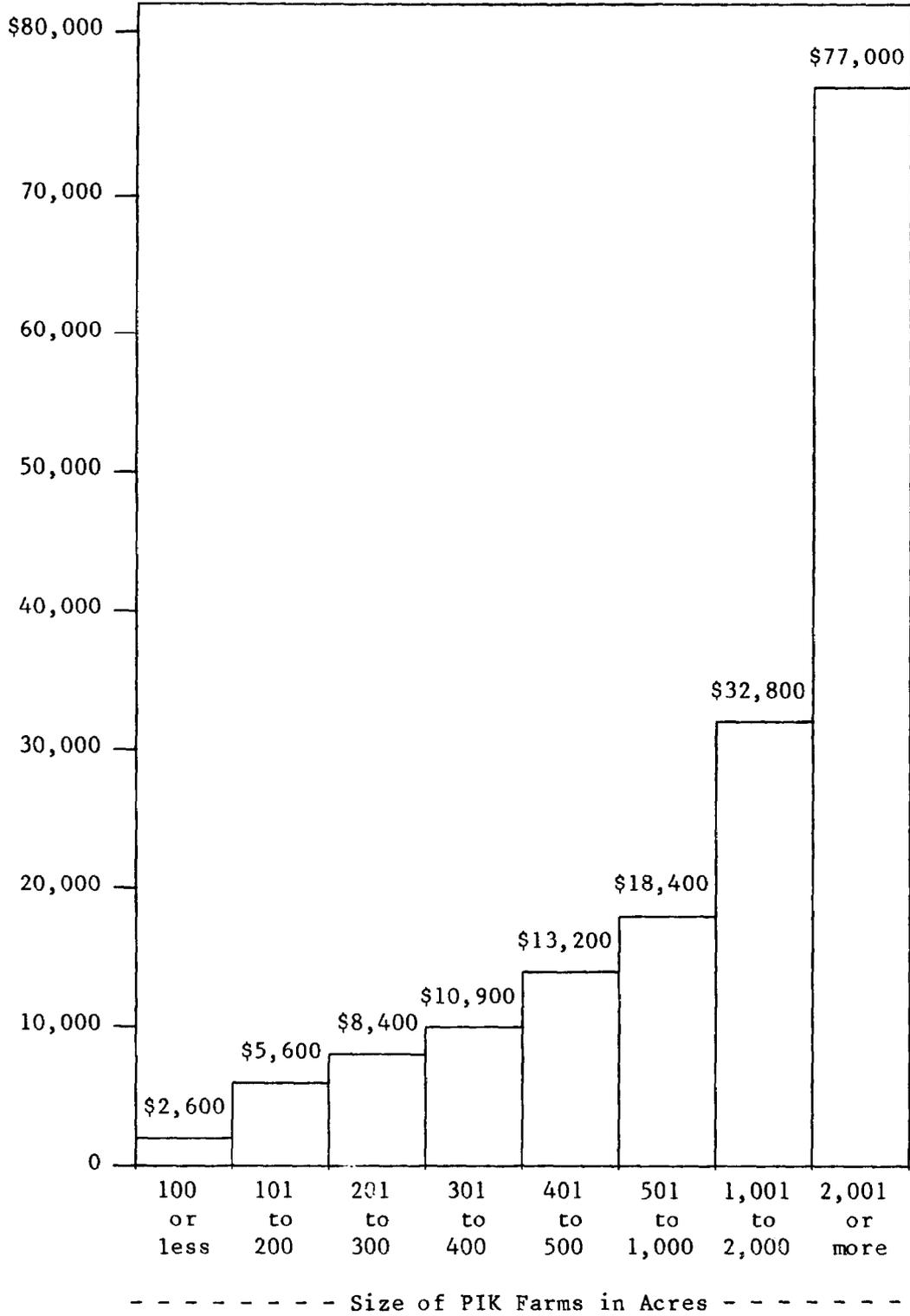
Distribution of PIK Payments by Farm Size



Moreover, using the data in table 12, we determined an average PIK payment by farm size. Again, these computations were based on the cost of the PIK commodities to the government. The results of this analysis are depicted in figure 2.

Figure 2

Average PIK Payment Value Per Farm
(Rounded to the nearest \$100)



DISTRIBUTION OF PIK
PAYMENTS BY TYPE OF PRODUCER

The following information presents data on the distribution of PIK payments by producer type. Specifically, we classified farms by two general types of ownership: farms owned by individuals and those owned by organizations such as corporations or partnerships. A relatively small number of farms could not be placed into either of these categories primarily because the owners did not provide valid identification numbers that we could use to determine the particular type of farm ownership. However, these "other" farms were less than one-half of 1 percent of the total. Also, because USDA makes payments to producers and not to farms, our analysis is based on payments to producers. A producer is distinguished from a farm in that a producer can receive payments on one or more farms.

Table 13 shows the distribution of PIK payments by type of producer. The data show that about 14 times as many individuals received PIK payments as did organizations. However, on the basis of the total payments, individuals received only about five times the total amount of payment that organizations received.

Table 13

Summary of PIK Payments by Type of Producer

<u>Producer type</u>	<u>Number of payees</u>	<u>Value paid (in millions)</u>	<u>Average value per producer</u>
Individuals	776,821	\$7,294.6	\$ 9,390
Organizations	53,982	1,536.9	28,471
Other	948	7.8	8,228
Total	<u>831,751</u>	<u>\$8,839.3</u>	\$10,629

To provide some further insight into the size of PIK payments received by the various types of producers, table 14 details distribution of the amount of payments by specific payment categories. On the basis of the data in table 14, about 97 percent of the individuals and about 85 percent of the organizations received PIK payments of \$50,000 or less. On the other hand, the 3 percent of the individuals who received more than \$50,000 received about 26 percent of all PIK payments to individuals. The 15 percent of the organizations that received more than \$50,000 received 65 percent of the PIK payments going to organizations and about 11 percent of all PIK payments.

Table 14

Distribution of PIK by Type of Producer

	Value of PIK quantities received									
	<u>\$1,000</u> <u>or</u> <u>less</u>	<u>\$1,001</u> <u>to</u> <u>\$10,000</u>	<u>\$10,001</u> <u>to</u> <u>\$25,000</u>	<u>\$25,001</u> <u>to</u> <u>\$50,000</u>	<u>\$ 50,001</u> <u>to</u> <u>\$100,000</u>	<u>\$100,001</u> <u>to</u> <u>\$250,000</u>	<u>\$250,001</u> <u>to</u> <u>\$500,000</u>	<u>\$500,001</u> <u>to</u> <u>\$1,000,000</u>	<u>More</u> <u>than</u> <u>\$1,000,000</u>	<u>Total</u>
<u>Number of:</u>										
Individuals	142,139	440,997	125,905	45,694	17,157	4,548	340	35	6	776,821
Organizations	4,529	23,015	11,163	7,157	4,913	2,587	487	102	29	53,982
Other	<u>348</u>	<u>459</u>	<u>84</u>	<u>25</u>	<u>18</u>	<u>11</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>948</u>
Total	<u>147,016</u>	<u>464,471</u>	<u>137,152</u>	<u>52,876</u>	<u>22,088</u>	<u>7,146</u>	<u>830</u>	<u>137</u>	<u>35</u>	<u>831,751</u>

PIK PAYMENTS WERE PROPORTIONAL
TO THE AMOUNT OF REDUCED ACREAGE

The PIK program was designed so that the amount of payment received by a particular farm was proportional to the amount of reduced acreage of the commodity being grown on the farm. Accordingly, if the program worked as it was designed, larger producers, which generally contribute more to the production of a particular crop, would get proportionately larger PIK payments. Conversely, smaller farmers would get smaller PIK payments.

To confirm that the PIK program operated as it was designed, we obtained information from ASCS' data file on the amount of reduced acreage versus the amount of PIK payments received by program participants. We did this for each of the five PIK commodities by various farm sizes. Table 15 summarizes the results of this analysis. The table shows that nationally the PIK payments were indeed proportional to the amount of reduced acreage for all crops and farm sizes. In this context, the program worked as it was designed to do.

Table 15

Summary of the Proportion of Acreage
Reduced Versus the Proportion of PIK
Payments Received^a

<u>Crop</u>		<u>Farm size</u>				
		(in acres)				
		<u>Under 100</u>	<u>101 to 300</u>	<u>301 to 500</u>	<u>to 1000</u>	<u>Over 1000</u>
Corn	% of acreage taken out of production	13.3	39.2	18.6	17.1	11.8
	% of PIK payments received	13.0	39.3	18.7	17.2	11.8
Sorghum	% of acreage taken out of production	8.1	28.8	19.2	22.7	21.2
	% of PIK payments received	8.0	28.8	19.2	22.8	21.2
Wheat	% of acreage taken out of production	6.9	22.0	16.0	23.3	31.8
	% of PIK payments received	6.7	21.8	16.1	23.4	32.0
Rice	% of acreage taken out of production	4.3	15.3	14.5	25.8	40.1
	% of PIK payments received	4.3	15.5	14.6	26.0	39.6
Cotton	% of acreage taken out of production	7.9	22.8	18.1	22.5	30.7
	% of PIK payments received	7.9	23.0	18.2	22.6	28.3

^aAnalysis is based on 87 percent complete data.

FARMER PARTICIPATION IN THE 1983 PIK PROGRAMCOMPARED WITH PREVIOUS PRODUCTION REDUCTION PROGRAMS

We compared participation rates from the 1983 PIK program with those of previous years, going back through 1978 for each of the PIK commodities and overall. Of course, none of the programs prior to 1983 included a PIK provision. Nonetheless, because the major provisions of USDA farm programs vary from year to year and because of economic conditions changing in the farm sector, assessing specific reasons for changes in participation rates over the years was difficult. However, reviewing available data on participation rates in past programs and discussing past years' experiences with ASCS county executive directors¹ in seven large agricultural states enabled us to make some observations about the participation rates for each year. We did not include 1980 and 1981 in our analysis, however, because these years included no farm programs aimed at inducing farmers to take portions of their land out of production. The programs for 1978, 1979, 1982, and 1983 all contained provisions to do this. For the 1983 program, we also analyzed the impact of USDA's determination regarding the \$50,000 payment limitation on participation in the 1983 program. USDA determined that the payment limitation, which applied to cash payments made to farmers in 1983, as well as prior years,² did not apply to PIK payments in 1983.

FARM PROGRAM PARTICIPATION RATES

We found that overall participation rates for all PIK commodities varied from a low of 37 percent in 1982 to a high of 64 percent in 1983. Basically, participation was greater when farmers were guaranteed cash or in-kind payments for idling their land or when they anticipated low market prices for their commodities and thus substantial deficiency payments from ASCS. For any specific crop, however, participation rates varied by commodity as a result of the farm program benefits guaranteed to or anticipated by the farmers for a particular crop. The high and low participation rates for specific crops were not always consistent with overall participation rates.

Participation rates in our analysis are defined as the number of cropland acres that farmers participating in a farm program can potentially plant for a specific crop versus the number of acres that all farmers--participants and nonparticipants--can

¹County executive directors are the chief administrative officials in ASCS offices across the country.

²Section 1101, Agriculture and Food Act of 1981.

potentially plant for a specific crop. For instance, in 1983 farmers participating in the PIK program could have planted 150.2 million acres of cropland for the five commodities covered by the PIK program. In contrast, the total number of acres of the five crops that could have been planted by all farms nation-wide--including both participating and nonparticipating farmers--was 234.2 million acres. In other words, 150.2 million acres out of a possible 234.2 million acres, or about 64 percent, were on farms that participated in the 1983 farm program. Accordingly, in this case the participation rate is 64 percent.

The specific provisions of a farm program vary by year and by crop. In general, however, USDA has used three major incentives to attract participation: deficiency payments, diversion payments, and eligibility for loans. Deficiency payments are cash payments made directly to participating farmers when a commodity's market price is lower than a set target price established by law. Diversion payments are cash or in-kind (commodity) payments made to participating farmers at a specified cost in return for taking prescribed percentages of their cropland out of production. Participating farmers are also eligible for loans made at established prices, which are in essence floor prices. As we previously discussed, under the terms of a loan, a participant agrees to store the commodity under loan and either pay back the proceeds or forfeit the commodity to USDA when the loan comes due. To become eligible for these benefits, farmers can be required to withdraw a certain percentage of cropland from production. Accordingly, the particular provisions in a particular farm program for a given crop are primary factors in a farmer's decision to participate.

In addition, however, to the specifics of a given year's farm program, other, more speculative, considerations enter into a farmer's participation decision such as anticipated weather patterns and current and projected market prices for the crops. The decision to participate in a farm program thus requires a farmer to weigh the potential benefits of participation as he/she sees them against the net revenues that can be lost by taking land out of production.

The following table provides the results of our analysis of participation rates for each commodity included in the PIK program, as well as the overall participation rate for all PIK commodities.

Table 16

National Participation Summary for All PIK Commodities by Year

Commodity	1983			1982			1979			1978		
	1983 total potentially planted acres for all farms	total acres potentially planted by participating farms	1983 percent participation	1982 total potentially planted acres for all farms	total acres potentially planted by participating farms	1982 percent participation	1979 total potentially planted acres for all farms	total acres potentially planted by participating farms	1979 percent participation	1978 total potentially planted acres for all farms	total acres potentially planted by participating farms	1978 percent participation
Corn	92,306,600	56,960,600	62	83,879,000	20,926,830	25	84,293,000	20,111,254	24	86,152,000	38,412,217	45
Grain												
Sorghum	17,354,300	10,218,900	59	16,838,000	6,530,000	39	16,359,000	9,601,547	59	17,868,000	11,964,922	67
Cotton	14,324,200	13,193,900	92	12,869,000	10,417,125	81	-----n/a voluntary program ^a -----					
Wheat	106,253,700	66,165,200	62	93,227,000	37,513,534	40	78,724,000	44,286,812	56	74,638,000	49,722,244	67
Rice	<u>3,962,300</u>	<u>3,657,500</u>	92	<u>3,717,000</u>	<u>2,797,281</u>	75	-----n/a allotment program ^a -----					
Total	234,201,100 =====	150,196,100 =====	64	210,530,000 =====	78,184,770 =====	37	179,376,000 =====	73,999,613 =====	42	178,658,000 =====	100,099,383 =====	56

^aTo keep the comparison of participation rates on a common basis, we excluded the cotton and rice programs for 1978 and 1979. The cotton program was excluded because there were no specific acreage reduction requirements for those choosing to participate in the program. The rice program was excluded because it was under an allotment system where program participation and benefits were limited to farmers having a rice allotment from USDA. However, the other commodity programs did contain such provisions in each of the years covered in the analysis.

As table 16 shows, overall participation was highest in 1983 when farmers were paid in cash or in-kind for prescribed amounts of acreage that had to be taken out of production to be eligible for program benefits and when all farmers were eligible to participate. Participation was also highest in 1983 for most individual commodities--corn (62 percent), cotton (92 percent), and rice (92 percent). Participation also tended to be relatively high when substantial deficiency payments were anticipated, as in the case of grain sorghum (67 percent) and wheat (67 percent) in 1978, and cotton (81 percent) and rice (75 percent) in 1982. In the case of 1978 grain sorghum and wheat, the 67-percent participation rates were higher than their respective participation rates in 1983. In 1983, the participation rates for these commodities were 59 percent for grain sorghum and 62 percent for wheat. On the other hand, when producers did not anticipate substantial deficiency payments, as was the case for grain sorghum (39 percent) and wheat (40 percent) in 1982, participation tended to be lower.³ It also tended to be lower when commodity market prices were relatively strong and the major program benefits consisted of eligibility for loans and the possibility of deficiency payments. An example of this latter condition was corn in 1982, when participation was 25 percent.

IMPACT OF USDA'S DETERMINATION THAT
THE \$50,000 PAYMENT LIMITATION DID
NOT APPLY TO PIK PAYMENTS

USDA's determination that the payment limitation did not apply to PIK payments in 1983 meant that any in-kind payments to producers would not have to be limited to \$50,000. Accordingly, producers who otherwise might not have participated in the program because their total program payments, including their PIK payments, might have exceeded \$50,000, could now participate in the PIK program. We found that USDA's determination that the \$50,000 limitation did not apply to PIK payments increased program participation in 1983.

Specifically, we found that about 5 percent of all producers that participated in the 1983 PIK program received payments in excess of \$50,000. These payments included cash payments made for deficiency and land diversion aspects of the program as well as PIK payments. On the basis of this, we estimate that about 15.8 million acres were taken out of production in return for payments

³In commenting on this report, ERS noted that an additional factor contributing to the participation rates in 1982 was that USDA was offering higher loan rates to farmers for putting their grain in the farmer-owned reserve. In fact, the regular loan rates by CCC were 35 cents less per bushel than those for the FOR loans.

made in excess of \$50,000. This acreage was about 22 percent of all the land taken out of production by those producers participating in the PIK program.

Further, in our discussions with 185 CEDs, 148 of them told us that, on the basis of their experiences in their respective counties, USDA's determination that the \$50,000 payment limitation did not apply to PIK payments increased participation in 1983. According to the CEDs, the extent of the increase, however, varied among counties from as little as one farm in a county to hundreds of farms in others.

AGENCY COMMENTS AND
OUR EVALUATION

ERS commented that our analysis of program participation for the 1983 program should also include an analysis of the different components of the 1983 program, specifically the acreage reduction program, paid land diversion program, regular 10-30 PIK, and whole-base PIK. As it is, we did an analysis of the entire 1983 program, which included all of these components as a group. We did not analyze participation for each of the components of the 1983 program because our emphasis was on the overall 1983 program as it compared with overall program participation in prior years' programs. Thus, in order to focus our analysis on the differences in participation rates from 1 year to the next, it was necessary, in our opinion, to look at participation in each year's program as a whole and not at its individual components.

ANALYSIS OF PIK'S WHOLE-BASE BID COMPONENT

Farmers choosing to participate in the 1983 PIK program had two options available. One option was to place a portion of a farm's base acreage into the program. This option, called regular PIK, required that from 10 to 30 percent of the acreage be taken out of production. Under the regular PIK program, a participating farmer was paid a prescribed percentage of the commodity that otherwise would have been grown on the PIK acres.

The second option available to a farmer, called whole-base PIK, placed a farm's entire base acreage into the PIK program. Under this option a farmer was not paid at a prescribed rate but was paid on the basis of a bid that the farmer had to submit to his or her local ASCS office. The bids were submitted to a farmer's respective county ASCS office. The county ASCS office then reviewed the bids and selected the lowest ones for participation in the whole-base PIK program. If a farmer's bid was not accepted, participation in the whole-base PIK program was precluded. Not all bids were accepted because the PIK program requirements did not permit more than 45 percent of the base acreage for a PIK commodity in any county to be taken out of production. Consequently, in reviewing the bids, each ASCS county office was prohibited from accepting any bids that would result in more than 45 percent of a county's base acreage participating in the program. Further, like the regular PIK option, farmers participating in the whole-base PIK option were paid in commodities they otherwise would have grown. The whole-base bid option was available to farmers of each PIK commodity. However, no whole-base bids were accepted for rice producers because USDA determined that the rice producers' participation in the regular PIK program was sufficient to accomplish program objectives.

We analyzed the whole-base PIK program to provide

- national data on the bids received and accepted under the whole-base PIK component of the program;
- overall data on the total amount of acreage taken out of production and placed into conservation use as a result of whole-base PIK, including a state-by-state breakdown of the conservation use acres that resulted from the whole-base bids accepted by USDA;
- data on what it cost USDA to accept whole-base bids versus what it would have cost under the regular PIK program, including data on the amount of additional acres required to be taken out of production and placed into conservation as a part of whole-base PIK versus the amount of acres that would have been required for conservation use under the regular PIK option.

BIDS ACCEPTED AND REJECTED
UNDER THE WHOLE-BASE PIK OPTION

The bids accepted and rejected under the whole-base component of the PIK program are summarized in table 17. Table 17 provides three bid statistics for each commodity: the mean or simple average; the median, which is the value that most closely reflects a bid where half the bids are above and half the bids are below; and the mode, which is the most frequent bid. The information in the table is based on data as of July 27, 1984, at which time the data were about 96 percent complete.

Table 17

Accepted and Rejected Bid Data by Crop
for All of U.S.^a

<u>Crop</u>	<u>Maximum payment rate^b</u>	<u>Accepted bids</u>			<u>Rejected bids</u>		
		<u>Mean</u>	<u>Median</u>	<u>Mode</u>	<u>Mean</u>	<u>Median</u>	<u>Mode</u>
Corn	80	73	74	80	77	78	80
Grain sorghum	80	73	75	80	75	76	80
Wheat	95	86	89	95	87	90	95
Cotton	80	72	74	80	72	74	80

^aAll figures in the table are expressed as percentages.

^bThe maximum payment rate for each commodity was equal to the prescribed payment rates for the regular PIK program participants. USDA accepted no bids higher than these rates.

Overall, 337,863 bids were received by ASCS for participation in the whole-base bid program. Of these bids, 274,577 were accepted and 63,286 were rejected (excluding rice).

ACREAGE PLACED INTO CONSERVATION
USE OWING TO WHOLE-BASE PIK PROGRAM

All farmers participating in the 1983 PIK program were required to place land taken out of production into conservation use. For those farmers participating in the whole-base bid component of the program, the requirement was to place all of the farms' base acreage into conservation use.

As a result of this requirement, 22.6 million acres of land were to be placed into conservation use in 1983. The 22.6 million acres were for all four crops for which whole-base bidding was accepted. The land placed into conservation does not include any rice acreage since no whole-base bids were accepted for that

crop. The following table provides the number of conservation use acres for each crop included in the whole-base bid component of the program.

Table 18

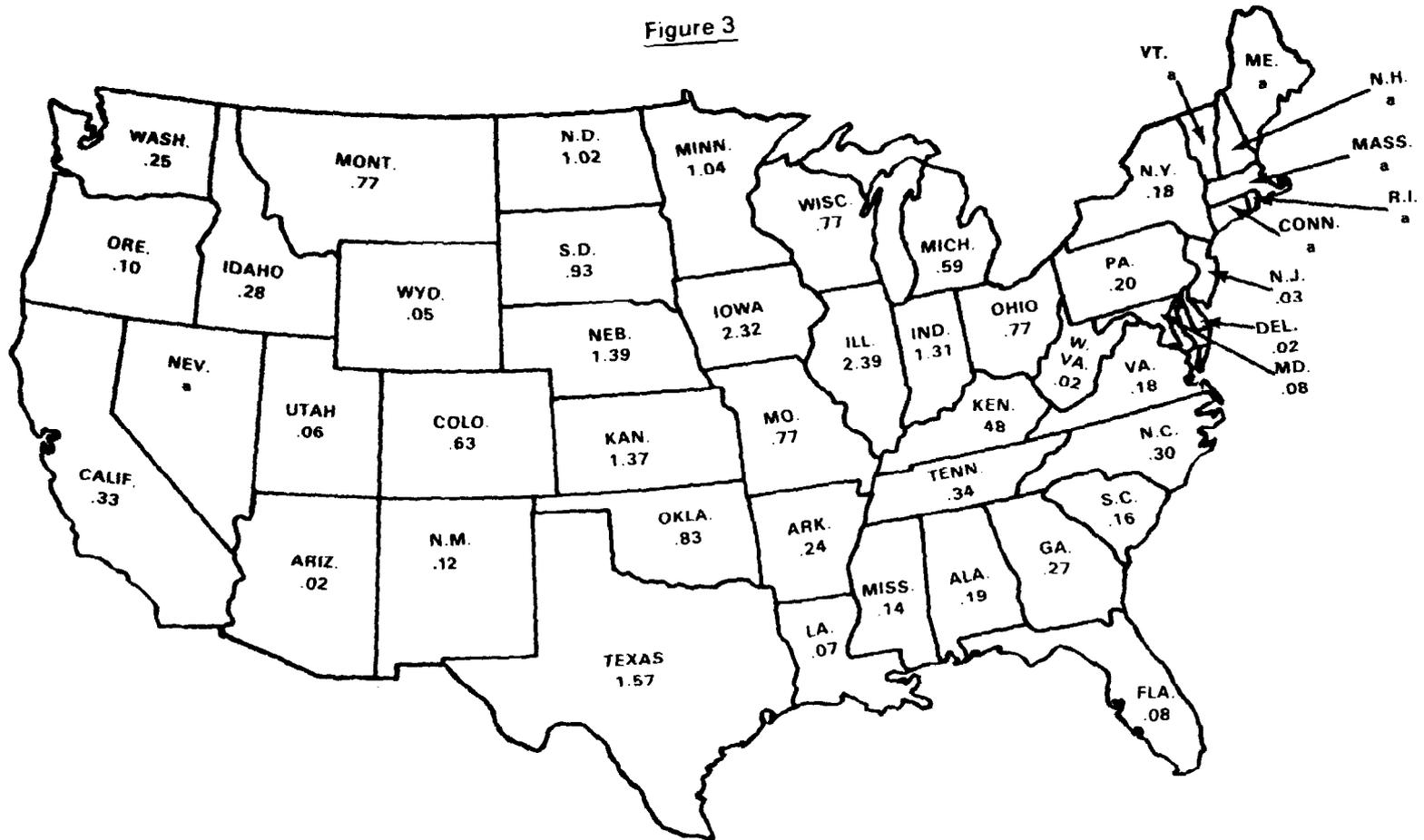
Number of Conservation Use Acres
for Each Crop Included in
Whole-Base Bid Component of PIK

<u>Crop</u>	Number of conservation use acres (<u>in thousands</u>)
Corn	12,431.2
Grain Sorghum	1,539.7
Wheat	7,727.5
Cotton	<u>932.1</u>
Total	<u>22,630.5^a</u>

^aThis figure represents all of the acreage taken out of production by those participating in the whole-base bid component of the program.

In addition, figure 3 shows the amount of conservation use acreage associated with this aspect of the program by state.

Figure 3



**Number of Conservation Use Acres
Included in Whole Base PIK
State Breakdown^b**
(all figures are in millions)

^a Denotes less than 10,000 acres in the whole base aspect of the PIK program for 1983.
^b Alaska and Hawaii did not have any acreage in the whole base aspect of the PIK program for 1983.

COST OF WHOLE-BASE BID
VERSUS REGULAR PIK OPTION

To compare the cost of the whole-base bid component of the PIK program with the 10-30 percent component of the regular PIK program, we determined USDA's cost for each acre taken out of production under each component of the PIK program. We found that it was less costly to get an acre out of production under the regular PIK option--\$146.41--than under the whole-base PIK option--\$171.89.

In doing this analysis, we assumed that all farmers with accepted whole-base bids would have been in the regular PIK program if their whole-base bids were not accepted. To determine the number of acres that would have been taken out of production in the 10-30 PIK option instead of the whole-base PIK option, we assumed that the level of participation for these farmers would have been the same as that actually experienced for the farmers who enrolled in the 10-30 PIK option. For each PIK commodity having a whole-base bid option--corn, grain sorghum, wheat, and cotton--we determined what the average level of participation was for producers that actually participated in the 10-30 PIK option. For example, for all corn farmers who originally enrolled in the regular 10-30 PIK, the average level of participation was 28.4 percent. Thus, on average, each corn farmer who originally enrolled in the 10-30 option removed 28.4 percent of his/her base acreage from production in order to participate in the PIK program. Similar analyses for the other PIK commodities show levels of participation of 28.1 percent for grain sorghum, 26.7 percent for wheat, and 28.8 percent for cotton. We applied these rates to all farms with accepted whole-base bids.

This analysis shows that if all farmers with accepted whole-base bids participated in the regular PIK option instead of in the whole-base PIK option, about 10.8 million acres would have been taken out of production. This is derived as follows:

Table 19

Converting Whole-Base PIK Acres
to Regular (10-30) PIK Acres

Crop	Whole-base acres	10-30 PIK acres		
	Actual number of whole- base acres (in thousands) <u>column 1</u>	Conversion factor ^a (percent) <u>column 2</u>	Number of acres required for PIK ^b (col. 1 x col. 2) (in thousands) <u>column 3</u>	Estimated number of acres after converting whole- base to 10-30 PIK ^c (in thousands) <u>column 4</u>
Corn	12,431.2	28.4	3,530.5	6,016.5
Grain Sorghum	1,539.7	28.1	432.7	740.5
Wheat	7,727.5	26.7	2,063.2	3,610.8
Cotton	<u>932.1</u>	28.8	268.4	<u>455.7</u>
Total	<u>22,630.5</u>			<u>10,823.5</u>

^aThe conversion factor, expressed as a percentage, represents the actual percentage of participation experienced for the regular PIK program.

^bThese figures are the number of acres that would have been taken out of production as part of the regular PIK program if there had not been a whole-base PIK option. This assumes that those farmers that participated in the whole-base bid program would have otherwise participated in the regular 10-30 PIK program at the national average participation rate.

^cThese figures are the sum of the estimated acres required for the 10-30 percent PIK (column 3) plus the number of acres that would have been required under the two prerequisite programs--the paid land diversion program and the acreage reduction program. For example, a corn farmer with 100 acres participating in regular PIK would be required to take 10 percent, or 10 acres, out of production to comply with the acreage reduction requirements and an additional 10 percent, or 10 acres, to comply with the paid land diversion requirements before he/she could participate in the regular 10-30 PIK program. Accordingly, the acreage that would have been taken out of production to meet these requirements was added to the regular PIK acreage (column 3) in arriving at the total amount of acres that would have had to be taken out of production in converting whole-base PIK acres to regular PIK acres.

As column 1 in table 19 shows, the actual number of acres taken out of production by all farmers with accepted whole-base bids was about 22.6 million.

We determined how much it cost USDA for each acre out of production under the whole-base bid option of the program--22.6 million acres. We then compared this figure with how much it would have cost USDA for each acre of land removed from production if there had been no whole-base bid component of the program and these farmers had participated in the 10-30 percent component of

the program--10.8 million acres. The result of this analysis provides a comparison of the per-acre costs of the whole-base bid option versus the 10-30 percent.

The analysis shows that the per-acre cost of each commodity would have been less under the 10-30 percent component of the program than under the whole-base bid component. Specifically, for wheat and cotton the cost differences were slight compared with the average national cost differences or with those for corn and grain sorghum. For wheat, our analysis shows that USDA's cost to remove an acre from production would have been \$5.46 per acre cheaper under the regular PIK option than under whole-base PIK; for cotton, it would have been cheaper by about \$4.55 per acre under the regular PIK program. For corn and grain sorghum, on the other hand, the per-acre cost differences between whole-base PIK and regular PIK were more significant. For corn, it cost \$40.73 more for USDA to get an acre of land out of production under whole-base PIK than it did under regular PIK; for grain sorghum, it was \$22.88 less per-acre for regular PIK. Table 20 shows how we arrived at these figures.

Table 20

The Effect of Changing the Whole-Base
Program to the 10-30 Program
--Cost Per Acre--

<u>Crop</u>	<u>Whole-base PIK</u>				<u>Regular (10-30) PIK</u>			
	<u>Conservation use acres^a</u>	<u>Reduced production^b</u>	<u>Cost to government^c</u>	<u>Cost/ acre</u>	<u>Conservation use acres^a</u>	<u>Reduced production^b</u>	<u>Cost to government^c</u>	<u>Cost/ acre</u>
	(thousands)	----- (millions)	-----		(thousands)	----- (millions)	-----	
Corn	12,431.2	1,301.1(bu)	\$2,656.8	\$213.72	6,016.5	629.8(bu)	\$1,040.8	\$172.99
Grain								
Sorghum	1,539.7	90.2(bu)	186.6	121.19	740.5	43.4(bu)	72.8	98.31
Wheat	7,727.5	260.9(bu)	863.8	111.78	3,608.8	121.9(bu)	383.9	106.32
Cotton	<u>932.1</u>	<u>467.8(lb)</u>	<u>182.8</u>	196.12	<u>455.7</u>	<u>728.7(lb)</u>	<u>87.3</u>	191.57
Total	22,630.5 *****	NA *****	\$3,890.0 *****	\$171.89	10,821.5 *****	NA *****	\$1,584.8 *****	\$146.41

^aConservation use acres are those required to be taken out of production to satisfy PIK program requirements. The figures are from table 18.

^bReduced production was calculated by multiplying the conservation use acreage by the yield per acre for each crop.

^cThe cost figures for whole-base PIK include both the value of the PIK commodities paid to participating farmers and the cash payments made to them under the paid land diversion aspect of the program. The cost figures for regular (10-30) PIK include the value of the PIK commodities that would have been paid to participating farmers, the cash payments that would have been made under the paid land diversion requirements of the program, and any deficiency payments that would have been made for the planted acres. There were no deficiency payments made to farmers participating in the whole-base bid component of the program because they were precluded from planting any crops on their base acres. The PIK values used in these calculations are those based on our estimates of the cost of the commodities to the government as discussed in appendix 11.

The principal reason for the larger disparity for corn and grain sorghum was that USDA did not have to pay producers of these commodities deficiency payments in 1983 because the market prices were above established target prices. Accordingly, USDA's per-acre costs for corn and grain sorghum did not have to include deficiency payments. The per-acre costs for wheat and cotton did include deficiency payments because the market prices for those commodities were lower than the established target prices for 1983.

Further, as table 20 shows, the average cost for all commodities was \$171.89 for each acre taken out of production and put

into conservation use under the whole-base bid component of the program. In contrast, we estimate that it would have cost USDA about \$146.41 per acre if the acreage was taken out of production and put into conservation use under the regular PIK component of the program instead of the whole-base bid component--a difference of \$25.48 per acre. The \$171.89 and \$146.41 figures are based on national average data for all commodities included in the whole-base bid option of the program.

Although we have already noted the principal reason for the disparity between cost figures for corn and grain sorghum, another reason the total cost figures differ is that under the whole-base PIK option, participants were paid for every acre of land taken out of production. However, participants in the regular PIK option were not. For instance, under the procedures governing the whole-base bid option, a wheat farmer having a 100-acre farm was paid cash under the paid land diversion aspect of the program on 5 percent of his/her land (5 acres) and received payment-in-kind on the remaining 95 percent of the land (95 acres). On the other hand, if the same producer had participated in the regular PIK program up to the maximum level, or 30 percent, he/she would have received cash payments on 5 percent of the land and PIK payments on 30 percent. On the balance of the land--65 acres--50 would have been planted with wheat and 15 acres, or 15 percent, would have been taken out of production without the producer's receiving any direct payment from USDA. This was because there was an unpaid acreage reduction requirement for participants in the regular PIK program--for wheat, this acreage reduction requirement was 15 percent of a farm's acreage base. Accordingly, the fact that USDA required participants in the regular PIK program to take a portion of their land out of production at no direct cost to USDA reduced USDA's per-acre costs under this aspect of the program compared with the costs incurred for the whole-base bid component of the program.¹

Our analysis of this issue focused on the per-acre costs for the two PIK options; it did not consider the impact that changing whole-base PIK participants to regular, 10-30 percent PIK participants would have had on the cost and effectiveness of the overall PIK program. According to our analysis, changing the whole-base bid acreage to regular PIK acreage would have reduced the number of acres taken out of production by about 11 million. This reduction would have been even greater if, contrary to our assumption, some of the whole-base PIK participants would have chosen not to participate at all if their only PIK option had been the regular

¹Although there is no direct cost to the government, any deficiency payments that were made to farmers participating in the regular 10-30 PIK program could be looked upon as being a cost for their acreage reduction requirement since it is a prerequisite for participating in the program.

10-30 program. With fewer acres taken out of production, production levels for 1983 would have increased, and additional commodity storage and handling costs could have been incurred by USDA. It could also have lowered commodity prices and, thus, raised 1983 deficiency payments, which would in turn have increased the costs of the regular 10-30 PIK program. Also, it should be noted that if our analysis was based on the cost per bushel or cost per pound instead of the cost per acre, the cost per bushel or pound may have been no higher under whole-base PIK than it was under regular 10-30 PIK. This is because with whole-base PIK, farmers idled all of their acreage, including any high-yielding acreage they might have had. In contrast, farmers participating in the regular 10-30 PIK program could have chosen to idle their lowest yielding acres. Further, we did not consider the economic impact this would have had on the agricultural sector of the economy as a whole.

AGENCY COMMENTS AND OUR EVALUATION

In commenting on this section of the report, ERS observed that the methodology we used to compare the cost per acre between whole-base PIK and the regular, 10-30 PIK is confusing and unnecessarily complicated. In this context, ERS offered an alternative method of doing this analysis.

On the basis of these comments, however, we do not believe that using the alternative methodology suggested by ERS is warranted nor do we believe our current methodology is unnecessarily confusing or complex. The basis for our analysis was to use the actual figures on the number of acres in the whole-base bid aspect of the PIK programs and determine the cost difference between those acres and the number of acres that would have been in the program under the regular, 10-30 PIK. The kind of analysis used in this section meets this objective. While the analysis is complex, we believe it is necessarily complex in view of our objective. Probably the most important point to be made here, however, is that we and ERS are in agreement about the overall results of this kind of analysis. That is, on a per-acre basis, regular PIK was less expensive than whole-base PIK.

ERS also commented that the 1983 drought's impact on market prices for feed grains eliminated the need for deficiency payments for those commodities (corn and grain sorghum). Thus, according to ERS, a hindsight calculation overstates the cost of the whole-base PIK program relative to the regular PIK program because no deficiency payments were made. Because there were no deficiency payments, the per-acre cost of the regular PIK program was much less than the expected cost before PIK and the drought. We do not disagree with ERS' comment on this point. However, the focus of our analysis was to assess the per-acre cost of whole-base PIK versus regular PIK as defined at the time the program was announced. At the time, of course, the occurrence of the drought

was unforeseen. Accordingly, the impact of the drought was not a factor in USDA's decisions regarding the development of the whole-base or regular PIK program provisions. As a result, we believe it is more appropriate to focus on the costs for these two components of the PIK program without regard to the impact the drought eventually had.

PIK PROGRAM HAD A SIGNIFICANT
IMPACT ON SOIL AND WATER CONSERVATION

All acreage taken out of production in order to participate in USDA farm programs had to be devoted to conservation use. In 1983, this included land taken out of production under USDA's acreage reduction program, paid land diversion program, and the PIK program.¹ Further, for any land taken out of production in order to participate in a farm program, each farmer was required to follow prescribed conservation practices to protect the acreage from wind and water erosion. We reviewed the information available on the soil and water conservation aspects of the 1983 farm programs to determine (1) the amount of soil and water conserved on farms participating in the PIK program, (2) what the conservation requirements were for PIK participants, (3) how USDA assured that participating farmers were complying with the conservation provisions of the program, and (4) the extent to which PIK farmers complied with conservation requirements.

We found the following:

- According to data collected by USDA's ASCS and SCS and analyzed by ERS, farmers participating in the 1983 PIK program reduced average annual soil loss on land taken out of production by a total of 125.6 million tons nationally. In addition, about 12.2 million acre-feet² of water was saved that would otherwise have been used for irrigation on the land taken out of production by PIK farmers.
- Land taken out of production and put into conservation use by participants in the 1983 PIK program was subject to the same conservation requirements as any other land designated for conservation use under a USDA farm program. Specific conservation requirements varied because they were set by local ASCS county committees.
- USDA assured that farmers participating in the PIK program complied with the applicable conservation requirements by making compliance checks on a random sample of farms in

¹For the 1983 farm programs, producers could choose to participate in the PIK program only if they also agreed to participate in the acreage reduction program and the paid land diversion program. A farmer could also elect to participate only in the latter two programs and not in PIK.

²An acre-foot is a measure of the volume of water equal to that amount required to cover 1 acre, 1 foot in depth. It is the equivalent of 43,560 cubic feet.

each county. The random sample was made by ASCS on 15 percent of the participating farms in each county and included PIK farms as well as farms participating in farm programs for other crops such as barley, oats, and tobacco.

--According to a study done by USDA's OIG, about 6 percent of the farms that participated in 1983 farm programs, including the PIK program, did not comply with required conservation practices. Further, about 8.5 percent of the farms removed ineligible land or insufficient amounts of land from production to meet 1983 conservation program requirements.

AMOUNT OF SOIL AND WATER
CONSERVED OWING TO PIK

USDA's ERS developed the conservation savings estimates attributed to the 1983 farm programs on the basis of data collected by ASCS and the Soil Conservation Service. The data collected by ASCS and SCS were obtained as part of a special evaluation done at the direction of the Secretary of Agriculture.³ The purpose of the evaluation was to determine the amount of soil and water conservation resulting from the 1983 PIK program, including the acreage reduction and paid land diversion parts of the program. In doing its evaluation, ERS based its conservation savings figures on a sample of participating farms because final data on program participation were not yet available. At the time of the analysis, about 86 percent of the data was available. Using the sample data, ERS projected national soil and water conservation results for all farms as well as for farms participating in the PIK program. The results are summarized in table 21.

³This evaluation was contained in a draft report entitled "Conservation Benefits of 1983 PIK and Acreage Reduction Programs, A Preliminary Report," Mar. 5, 1984.

Table 21

Estimates of Soil and Water Conservation Savings Resulting from 1983 Farm Programs^{a, b}

	Conservation savings		Acres affected		% of PIK Acres in		% of conserva- tion savings	
	All partic- ipating		All partic- ipating		10-30 PIK Whole-base		PIK	Non-PIK
	farms	PIK farms	farms	PIK farms			farms	farms
	----- (millions) -----							
Soil conservation savings (tons)	135.2 (28)	125.6 (28)	75.2 (8)	66.7 (8)	73	27	93	7
Water conservation savings (acre feet of water)	13.0 (33)	12.2 (34)	8.4 (29)	8.0 (29)	82	18	94	6

^aThe estimates in this table are based on a sample of farms rather than all farms because the data were only 86 percent complete at the time of the analysis. As a result, the figures in the table are subject to sampling variation. The sampling error, or coefficient of variation associated with each estimate, is shown in parentheses under each figure in the table as appropriate. The coefficient of variation indicates the percentage by which each estimate may differ from the actual figures if all farms would have been reviewed instead of just a sample.

^bThe coefficients of variation reflected in this table are based on a confidence level of 67 percent. In other words, about 67 percent, or two-thirds of the time, the estimates will differ from the actual numbers by no more than the percentage shown. About 95 times out of 100, the estimates will differ from the actual numbers by no more than twice the percentages shown. For example, the estimate of tons of soil conserved by all PIK farms is 125.6 tons. Applying the rate of 28 percent to the 125.6-million-ton figure means that at the 67-percent level of confidence, the actual amount of soil conserved on all PIK farms will be between 125.6 million tons \pm 28 percent (or about 35 million tons). At the 95-percent level of confidence, the amount of soil conserved on all PIK farms will be between 125.6 million tons \pm 56 percent (or about 70 million tons).

As table 21 shows, for all farms participating in USDA's 1983 farm programs, ERS estimated that USDA-approved conservation practices were applied to 75.2 million acres of land. As a result, about 135.2 million tons of soil and 13 million acre-feet of water were conserved. Of these amounts, PIK participants accounted for 125.6 million tons, or 93 percent, of the soil conserved and 12.2 million acre-feet, or 94 percent, of the water conserved.

CONSERVATION REQUIREMENTS FOR THE PIK PROGRAM

Land taken out of production and put into conservation use by PIK participants was subject to the same conservation requirements

as any other land designated for conservation use under the acreage reduction or paid land diversion programs for 1983. The basic requirement was that any land taken out of production be protected from wind and water erosion. Although specific conservation practices were recommended by USDA, they were not required at the local level. Requirements adapted to local conditions were set by the respective ASCS county offices.

Acreage designated for conservation use and the obligations of a participating farmer with respect to the use of the acreage are contained in Title 7 of the Code of Federal Regulations, parts 713.60 through 713.74. The regulations require that any land taken out of production as a condition of participating in a farm program be protected from wind and water erosion by applying approved cover crops or conservation practices. The regulations discuss some approved cover crops and conservation practices as well as a procedure for approving those crops and conservation practices not included in the regulations. However, because soil, crops, and climate conditions vary throughout the country, the conservation requirements are typically established at the local level. In these instances, the local ASCS Committee sets the conservation requirements, in consultation with the SCS district conservationist. The standards are then subject to review and approval of the State ASCS Committee and the concurrence of the SCS state conservationist.

According to the national regulations, approved conservation measures permitted farmers to cover their land with annual, biennial, or perennial grasses and legumes. In addition, small grains--barley, oats, rice, and wheat--were allowed as cover crops, but only if they were planted too late to be harvested or if they were cut so they could not be harvested. Other cover crops and conservation measures were also allowed as long as they met established criteria.

The 1983 national regulations applied to all PIK participants with the exception that (1) farmers in the program could not use summer fallow⁴ land as conservation acreage for PIK and (2) farmers who had planted wheat prior to January 11, 1983--the day the PIK program was announced--were permitted to use the land for livestock grazing and to harvest it for hay as an added inducement to participate in the program.

⁴Fallow land is cropland left idle during the growing season. It is usually tilled to control weeds and conserve moisture.

USDA PROCEDURES FOR
DETERMINING COMPLIANCE WITH
CONSERVATION REQUIREMENTS

USDA's procedures for determining whether farmers complied with the conservation requirements of the 1983 farm programs, including farmers participating in PIK, are detailed in Title 7 of the Code of Federal Regulations, part 718, and in ASCS' Acreage and Compliance Determinations Handbook. These procedures were in place prior to the 1983 PIK program. They call for compliance checks to be conducted by ASCS county offices using a random sample of 15 percent of the farms in each county. The random sample is drawn from all farms participating in the farm program, and in 1983 included farms with crops covered by the PIK program as well as other crops for which USDA had farm programs, such as barley, oats, and tobacco.

The compliance checks include verification that the land designated to be taken out of production, in order to participate in a farm program, met ASCS eligibility criteria and verification of the number of acres actually put into conservation use. In most cases--97 percent--ASCS determined a farm's actual conservation use acreage by taking an aerial photograph of the farm and comparing the photograph with the farm's planted and conservation use acreage as previously reported to ASCS. ASCS county offices would typically make onfarm inspections only in cases where acreage verifications could not be made by using the aerial photographs.

When a compliance check reveals that the acreage on a farm differs from the acreage reported to ASCS, within specified limits, a discrepancy is noted for the farm. For example, the ASCS Acreage and Compliance Determinations Handbook states that a discrepancy exists when the acreage, as determined by, the compliance check, is less than the acreage required by the provisions of the farm program by more than the larger of 1 acre or 5 percent of that acreage required by the specific provisions of the farm program.

When the compliance checks are completed, the county ASCS office prepares a compliance report and forwards it to the state ASCS office. The county compliance reports are then summarized by the state office and forwarded to ASCS headquarters in Washington, D.C., which then prepares a national compliance report.

However, while compliance reports reveal discrepancies between the acreage reported to ASCS and the actual acreage taken out of production on farms participating in a farm program, they do not provide information on whether farmers complied with required conservation practices. There is no requirement that the application of approved conservation practices be checked or reported to either state or national levels. Consequently, no overall information system provides data on the extent of farmers'

compliance. For the most part, such data are available only at the ASCS county office level.

EXTENT OF COMPLIANCE WITH CONSERVATION REQUIREMENTS

Because our review work began in the fall of 1983--after the 1983 growing season--it was not possible for us to determine independently the conservation compliance rates for farmers participating in the 1983 farm programs. However, we did review information available within USDA to get an indication of the compliance rates USDA experienced for its 1983 program.

The information available within USDA came from two sources--the national compliance report prepared by ASCS and a conservation compliance report prepared by USDA's OIG. As we noted previously, the national compliance report prepared by ASCS provided data on whether participating farmers met program conservation requirements by (1) taking land out of production that met ASCS eligibility criteria and (2) devoting the required number of acres to conservation use. The OIG compliance report, in addition to covering the same issues as the ASCS report, supplements the ASCS report by providing data on whether participating farmers complied with 1983 program requirements by applying approved conservation practices on the acreage devoted to conservation use. Because this information was readily available, we used it. However, we did not verify the accuracy of the data or the methodology used in deriving them.

ASCS compliance data

The data we obtained from ASCS show that during 1983, a sample of 429,539 participating farms were checked for compliance. Of these farms, 23,842, or about 6 percent, were found to have discrepancies where farmers either set aside ineligible acreage for conservation use or did not set aside the required number of acres. The data collected by ASCS were based on a 15-percent random sample of all farms in each county that participated in the 1983 farm program.⁵

OIG compliance data

In its study, USDA's OIG reviewed compliance with the conservation provisions of the 1983 farm program in the 20 states

⁵ASCS does not report sampling error; however, because of the large sample size, the sampling error should be minimal. Therefore, the estimates from the sample should be very close to the true values for all farms.

where farmers received the largest program payments.⁶ These states received 87.5 percent of all program payments. From the universe of counties in these 20 states, 70 ASCS county offices were randomly selected for review. Within the 70 counties, a sample of 1,157 farmers was reviewed.

On the basis of its review, OIG concluded that the majority of participating farmers complied with program requirements. However, some farmers were not in full compliance because they either did not carry out approved conservation practices or designated ineligible land or an insufficient amount of land for conservation use.

OIG estimates that farmers on 6 percent of the farms in the 20 states they reviewed did not carry out approved conservation practices for preventing soil erosion and controlling weeds. Accordingly, they estimate that farmers on about 42,000 farms did not properly maintain 1.8 million acres devoted to conservation use.⁷

Ineligible land or an insufficient amount of land was designated as conservation use acreage on about 8.5 percent of the farms. These farms are subject to loss of program benefits worth an estimated \$647 million and could be assessed liquidated damages of about \$128 million under their PIK contracts.⁸ In addition, there were inadequate cover crops on 6 percent of the acres.

⁶The report is entitled Agricultural Stabilization and Conservation Service's Payment in Kind (PIK) Programs: A Review of PIK Program Compliance and Effectiveness, Audit Report 3621-4-KC, December 1983.

⁷Since these estimates are based on a sample of cases, they are subject to error. However, at the 95-percent level of confidence, OIG can state that approved practices were not carried out on at least 3.5 percent of the farms.

⁸Numbers in this paragraph represent the best estimate from the OIG sample. However, at the 95-percent level of confidence, OIG can state that the percentage of farms is at least 6 percent, and the dollar amounts are at least \$438 million and \$86 million, respectively.

USDA'S APPROACH TO MEETING ITSPIK PAYMENT OBLIGATIONS

To determine the reasonableness of USDA's approach to meeting its PIK payment obligations, we reviewed the information available to USDA officials during the formative stages of the PIK program on the sources of commodities for meeting PIK payment requirements. Our objective was to determine whether the available information supported USDA's decisions regarding the sources of the commodities used for making PIK payments. Overall, we found that it did.

The level of participation in the PIK program significantly exceeded USDA's original expectations. Initially, USDA analysts estimated that about 25.5 million acres would be taken out of production for PIK. However, as it turned out, about 47 million acres were actually taken out of production. Accordingly, USDA's PIK payment obligations were almost twice what they were originally expected to be. The amount of commodities needed to meet PIK payment obligations was underestimated by 1.26 billion bushels of wheat, corn, and grain sorghum and 1.80 billion pounds of rice and cotton. However, we found that USDA planned for such a contingency and, in the final analysis, was able to meet its payment obligations.

HOW USDA ESTIMATED ITS
PIK PAYMENT NEEDS AND
COMMODITY SOURCES

USDA designed the PIK program so that payments could be made from two sources--producer loan collateral and commodity inventories owned by CCC. If a participating producer had one or more outstanding loans with CCC, USDA forgave part or all of the producer's loan or loans (principal and interest), and the producer retained the commodity as the PIK payment. A producer who did not have an outstanding loan received a letter entitling him/her to receive CCC-owned commodities as his/her PIK payment. Thus, the adequacy of stocks for the PIK program depended on two key variables: (1) the total amount of commodities either owned by, or under loan to, CCC and (2) the total quantity of commodities USDA was obligated to pay, which was determined by the level of participation in the PIK program. USDA prepared estimates of both variables to determine whether available stock levels would be sufficient to meet anticipated PIK payment needs.

Estimates of commodities
owned by or under loan to CCC

During November and December 1982, the period in which the PIK program was designed, USDA prepared weekly updates of CCC commodity inventory activity based on information supplied by its Kansas City field office. The Kansas City office maintains CCC

inventory and loan records, among other things. The inventory reports show, for each PIK commodity, the quantity (1) under loan to CCC, (2) owned by CCC but not available for PIK, and (3) owned by CCC and available for PIK. Not all CCC-owned commodities were available for PIK because some were committed to other purposes, such as USDA's requirement to maintain reserves to meet international food supply commitments.

USDA estimated that the amount of CCC-owned rice and cotton would increase before USDA had to begin providing these PIK commodities to farmers. USDA expected the increase to result from farmers' forfeiting outstanding CCC loans that were scheduled to expire. When farmers forfeit outstanding loans, they simply keep the loan proceeds, and CCC assumes ownership of the commodities that were serving as loan collateral. Farmers can be expected to forfeit their loans when the market price is less than the loan rate.¹ If the market price is more than the loan redemption value, farmers can be expected to repay their loans, take ownership of the commodities that were serving as collateral, and sell them at the (higher) market price.

The outlook for wheat, corn, and grain sorghum indicated that CCC could also acquire some of these commodities as a result of loan forfeitures by farmers. However, most of the outstanding wheat, corn, and grain sorghum loans were farmer-owned reserve loans, which differ from regular loans in that they are longer term loans with certain provisions discouraging forfeiture.² Therefore, USDA planned to acquire wheat, corn, and grain sorghum needed for PIK payments from farmers with FOR loans.

Estimates of payment needs

Overall, the total amount of commodities USDA needed to meet its PIK payment obligations was determined by (1) the number of acres put into the PIK program, (2) the amount of commodity normally harvested on each acre put into the program, and (3) the PIK payment rate for each commodity.

On the day the PIK program was publicly announced, January 11, 1983, USDA completed an analysis of the anticipated participation in the program. From this analysis, USDA was able

¹The loan rate is the dollar amount, per bushel or pound, that CCC lends producers for their crops. The loan rate varies, depending on the year in which the loan was made and the location where the commodities are stored.

²Generally, FOR loans are settled when the average market price for commodities under loan reaches and maintains a certain designated "trigger" level, at which time farmers may redeem their commodities and repay the loans. There are no FOR loans for rice or cotton.

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Last paragraph. Actions resulting from ineligible land or insufficient land being designated are discussed. Actions resulting from inadequate cover on 6 percent of the acres are not discussed. Should they be added?

[GAO note: Language noting this point has been added to the report.]

The Statistical Reporting Service (SRS), and the Office of Budget and Program Analysis (OBPA) indicated they had no comments on the report.

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